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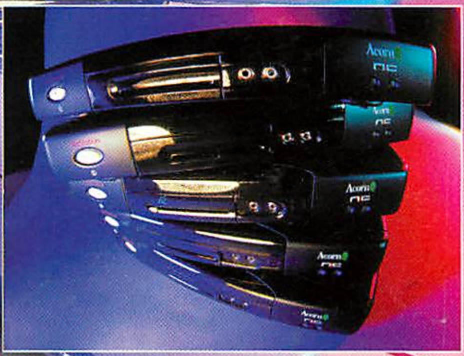
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Acorn's all new internet navigator

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September 1997 Issue 185 £3.95

09

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NetStation £Call

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The NetStation allows you to access the internet simply and cheaply without having to learn complex computer jargon.



Simply;
- connect to TV
- connect to phone
- plug in smartcard
- subscribe to ISP*

Browsing the World Wide Web will become as natural as using Teletext on the TV!

Corporate NetStations are also available fitted with ethernet cards for connection to a local network server. Visit our showroom for a demonstration. *ISP = Internet Service Provider eg. Demon.

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Carr.: a=£2, b=£6, c=£8

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Quantum 1Gb	£150b	-
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EZ135Mb Cartr.	£20a	270Mb Cartridge	£40a

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IDE interface	£69b	50-50C SCSI Cble	£12a
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Morley Cached	£165b	SCSI2-50C Cable	£18a
Cumana SCSI II	£175b	SCSI2-25D cable	£18a
		50IDC 4-way SCSI	£12a
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2nd IDE Drive Kit	£15a	50HPC Terminator	£15a

zip/jaz Drives

New

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- zip & jaz Drives work just like hard drives except they are removeable, giving instant access to files
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- The drives are fast. Data transfer speeds up to 1Mb/s for zip drives & >5.5Mb/s for jaz drives - ideal to backup your hard drive.
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- These drives require a SCSI card that is suitable for removeable devices.

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Pack of 6 zip Cartridges	£65b
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Single 1Gb jaz cartridge	£76a

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Multi-Session, PhotoCD, CD-DA, White & Green Book compatible. SCSI drives require SCSI card withCDFS>2.20

Carriage: a=£2, b=£6, c=£8

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Get 1 of the following free when you purchase a StrongARM RiscPC.

Option 1a - Family Pack (DK Human Body CD, Textease, ArtWorks.
Option 1a - Business Pack (EasiwriterPro, Eureka3, Datapower).
Option 2 - 17" AKF93 Monitor instead of 14" AKF60 Monitor.
Option 3 - Canon BJC-4200 Colour Bubblejet Printer.
Option 4 - QV10a Casio Digitial Camera with Acorn link and software

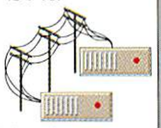
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Deduct £115 for iiyama MF-8617E or £95 for MT-9017E off 17" prices.

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QuickLynk (v1.04) £24a

With Local Cable 5m - £36a, 10m - £38a, 20m - £44a



QuickLynk allows you to access another remote RiscOS computer using the serial port via modems or locally using a cable to connect the 2 computers. Each computer can be configured to allow access to any attached filing system device eg ADFS, IDE, SCSI, CDFS, etc. Once connected, files can be transferred to/from the remote computer. Other features include password access, auto dialler with phone book and chat mode to send messages to remote computer/user. Transfer rates up to 1.9 kbytes/s can be achieved with older computers, eg. A410, A3000, rising to 11.4 kbytes/s on the RiscPC range. The transfer rate is limited by the serial port speed. QuickLynk cannot at present be used directly from programs/command line. Requires RiscOS 3.10 or greater.

QuickTile (v1.03) £25a



QuickTile allows you to create posters from ANY RiscOS application, including Impression. Simply enter the size of poster required & select PRINT from the application! QuickTile does the rest, printing each tile with crop marks and tile references. New features include the facility to print inverted crop marks or no crop marks. QuickTile can only be used with the RiscOS printer Driver or TurboDrivers.
Requires RISCOS 3.10 or later.
Return disc to upgrade for £4.
Upgrade from Tiler for £18.

Mail Order - 0161-474 0778 (All prices INCLUDE VAT) The lowest prices without compromise

RiscPC PC Cards

5x86-100 (512kb)	£380c
above price includes PC Pro	
5x86-100 (256kb)	£350c
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PC Pro (without PCExchange)	£38a
Window '95 CD (Full)	£75a

The above can be installed directly from CD without previously installing DOS or Windows.

RiscPC Upgrades

2nd Slice with PSU	£116c
2nd Slice without PSU	£90c
YES 16 bit Mozart Card	£70a

Memory

Following prices strictly whilst stocks last.

RiscPC/A7000 SIMMS

4Mb	£20a	8Mb	£29a
16Mb	£60a	32Mb	£110b

RiscPC VRAM

1Mb 2nd user	£40	2Mb	£95
1-2Mb u/g (exchange)			£75

Call for details of memory for other models.

Monitors (Carriage £10)

Older computers will require an adaptor £12

Ilyama MF-8617E 17"	£500
High spec FST Tube with 0.26" dot pitch	
Ilyama MT-9017E 17"	£530
Very High spec Diamondtron tube, 0.25" stripe	

Printers (Carriage £8)

Canon BJC-240	£145
Canon BJC-4200	£180
Canon BJC-4550 (A3)	£350
Canon BJC-5500 (A2)	£610
Canon BJC-620 (720dpi)	£240
Epson 400 (720dpi, 3ppm)	£190
Epson 600 (720dpi, 4ppm)	£275
Epson 800 (1440dpi, 7ppm)	£390
Epson 1520 (1440dpi, A2)	£700
HP LaserJets 6P	£550

Add £47 to above printers for TurboDriver

I³ Networking (Carr. £6)

A30X0 EtherLan 102	£140
Archi EtherLan 514	£140
RPC/A7k EtherLan 602	£120

Add £17 to above prices for Access+.

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Carriage: a=£2, b=£6, c=£8

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NEW Psion Series 5	**£Call**
Psion 3c	
1Mb RAM	£310b
2Mb RAM	£355b
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- one of the best packages for the PB/3a

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Mains Adaptor	£18a	PBII/Ps3a Games	£38a

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24i16 Card (1Mb)	£450b
Dual Serial Card	£104b
FPA for 25MHz ARM3	£67a
Joystick I/F (Not RiscPC)	£30a
Logitech Mouse (Acorn)	£26a
Midi Max Card (CC)	£79b
Movie Magic (1 only)	£210b
RiscTV Card (Irlam)	£265b
RiscTV Teletext option	£45a
Scart Cable (9 or 15 pin)	£12a
Serial Upgrade (A3000)	£27a
2 x 25W Speakers	£30b
2 x 80W Speakers	£35c
Videodesk (Irlam)	£1165b

Hard Cards/Multi-Pods

See top for other hard discs. Carriage £8

A3000/A3010 Hard Cards

340Mb	£175b
420Mb	£195b

Scanners (Carriage £8)

ScanLight Video 256	£215

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Include !TWAIN & ImageMaster for RiscOS. Bundles include CorelPaint & OCR software for PC's/PC Cards.

GTx-5000 Para bundle	£275
GTx-5000 SCSI bundle	£Call
GT-5000 SCSI (bare)	£Call
GTx-8500 Para bundle	£560
GT-8500 (bare)	£465
GTx-9500 Para bundle	£735
GT-9500 (bare)	£640

Modems (Carriage £8)

33.6 FLASH Sportster	£175
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Modems come with a 9-25 PC wired cable. A3000/Archi require an Archi wired cable.

ANT Internet Suite II	£105a
ArcFax	£31a
Dual Serial Card	£104b
9-25 Archi or PC Wired Modem Cable	£12ea.a
3-way Serial T-Switch (incl. comm. cable)	£32b

Printer Consumables

Carriage: £2 for Cartridges, £8 for Toner

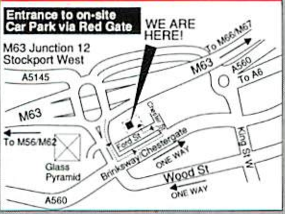
BJ-10 (BC-01)	£18	BJ-200 (BC-02)	£19
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BJI-201HCbk Black	£10	**BJC-4000 Series**	
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BJI-201C/M/Y	£8 ea.	BCI-21C Colour	£17
BJC-800		BC-20 Fast Black	£28
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BJI-643C/M/Y	£23 ea.	BC-22 Photo Kit	£39
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Colour	£25	Colour	£27

Epson Stylus Colour	Black £16/Colour £26
Epson Stylus Colour II	Black £20/Colour £26
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EP-L Toner (LBP-4/HP LJIII)	£64
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Acorn RISCOS3 PRM's	£99.95c
Acorn Volume 5a PRM	£29.75b
Acorn BBC Basic VI Guide	£19.95b
Acorn RiscPC Tech Ref Manual	£49.95c
ArtWorks Made Easy (Dabs)	£5.00a
Budget DTP (Dabs)	£5.00a
'C' A Dabhand Guide (Dabs)	£5.00b
RiscOS 3 First Steps (Dabs)	£5.00a
Wimp Programming for All (Beebug)	£10.95a

CD-ROM's (Carriage £2)

CD software for RiscOS

ArtWorks on CD (CC) (Carriage £6)	£88
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Dinosaurs (Microsoft)	£44
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ArcFax (David Pilling)	£31a
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Card Shop (Clares)	£23a
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Compression (CC)	£34a
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Easy C++ (Beebug)	£102a
Eureka v3 (Longman)	£93b
FireWorkz Pro (Colton)	£110b
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Font FX (DataStore)	£12a
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Impression Graphics Loaders (CC)	£40a
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Ovation Pro	£175c
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PhotoDesk2 (Spacetech)	£245b
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Sibelius 6 / 7	£163b / £898b
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E-Type 2 (4D)	£24
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GODS (Krisalis)	£10
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Acorn Centres of Technology

SEP 97

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Member of the Audit Bureau of Circulation.
Acorn User is an independent publication and Acorn is not responsible for any of the articles in this issue or for any of the opinions expressed.

IDG MEDIA

Published by IDG Media Ltd,
Media House, Adlington Park, Macclesfield SK10 4NP
e-mail aueditor@idg.co.uk
http://www.idg.co.uk/acornuser/
Tel: (01625) 878888 Fax: (01625) 850652
Printed by Apple Web Offset, Warrington

13 issue subscription rate: £39.99 (UK), £53.99 (EU), £68.99 (World)

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Acorn heralds the return of AcornSoft

Another test for *Acorn User* readers with long memories might be – when was the last time you came across *AcornSoft*? Can't remember? It's not surprising really as Acorn haven't operated AcornSoft for over 10 years, but that's all set to change as Chris Cox's products group within Acorn revive the once-illustrious AcornSoft brand.

The history books will tell you that in 1986 the AcornSoft brand was handed over to Superior Software, the third-party software house which was primarily a purveyor of BBC Micro games. Superior Software used the brand for a while, but the company have since disappeared from general view.

The rather surprising move by Acorn to off-load AcornSoft ended a long and successful software marketing exercise by Acorn which included many chart-topping games as well as serious software titles. Indeed AcornSoft usually set the standard by which the products of other Acorn market software houses were measured.

The revival of AcornSoft as an in-house Acorn brand will mean that RISC-based products will be officially AcornSoft branded for the first time – Superior Software acquired the AcornSoft branding rights just a year before Acorn launched the first Archimedes RISC computer.

Acorn's new World Wide Web browser, which now supports frames and tables, multi-tasking Replay and RISC OS Java. The upgrade to RISC OS 3.7 itself will be an AcornSoft branded product. Chris Cox and his team feel RISC OS 3.7 is a very important product which as many users as possible should upgrade to. The AcornSoft catalogue will also include the C/C++ programming language pack and a string of new releases will be announced during the rest of the year.

Both Sony and Hyundai license ARM

Hyundai makes ships, cars and soon, electronic devices with ARM processors inside. At the same time, Sony have announced that they too will be licensing ARM technology for use in consumer electronics products.

ARM Ltd says that their partnership with Sony will mean that 32-bit RISC CPU cores will be incorporated into a wide range of Sony consumer and professional electronics products and recording media. Sony has licensed the ARM7TDMI 'Thumb' processor and macrocells from ARM's AMBA on-chip peripheral library, with options for future processor cores. Thumb is a version of the ARM architecture which combined low implementation cost and low code space requirement. Thumb was specifically developed for embedded applications in compact battery-powered devices.

'Sony selected ARM's RISC technology because its industry leading price, performance and power efficiency make it the ideal solution for low-power, embedded applications,' said Dr S Watanabe, President of the Sony Semiconductor Company. 'With the addition of a world-class partner like Sony to the ARM partnership, we are that much closer to establishing ARM as the volume processor of choice,' said Robin Saxby, CEO and President, ARM.

ARM's other coup was Hyundai Electronics Industries Co Ltd (HEI), which announced they have also licensed the ARM7TDMI Thumb processor. HEI will use the technology for digital communications devices.

'HEI have been developing products based on ARM's technology since early 1996. We selected ARM's technology because of the network of partners it has built up in support of the architecture, in addition to its industry leading price, performance and power-efficiency,' said Dr Ki Soo Hwang, Vice President and General Manager, System IC Business Division, HEI. Current products include car navigation systems and digital entertainment systems.

Oracle announces NC server

Oracle have invested heavily in the establishment of the NC as a low-cost alternative to PCs in the networked environment.

However, neither Oracle nor their NCI subsidiary (which is tasked specifically with developing NC technology and third-party NC products) will make a penny out of selling NC hardware.

The big bucks for Oracle will be in the sale of database server software to which NCs will be connected. Oracle 8, which was launched recently, is the first such server platform designed specifically for the NC world.

From the Radio City Music Hall in New York, the larger than life Larry Ellison, Chairman and Chief Executive Officer of Oracle oversaw this latest stage in his vision of a world of NCs seeing off the Wintel dominance we have largely come to accept. Ellison evangelised, 'Oracle 8 is the component that makes network computing a reality.'

Ellison reminded his audience that the estimated cost of running a Windows-based networked environment of five users has been priced at $23,423 for one year.

He said the same computing capability using NCs and a NC server with Oracle 8 will cost $9,323. For this reason, Ellison predicted that the NC will replace Windows-based desktop systems in schools, homes and businesses of all sizes.

'Oracle8 will be to Network Computing what Windows was to the old world of personal computing,' proclaimed Ellison.

Others NC supporters are less uninhibited in their hopes for the NC, feeling that the NC won't be the death of the PC but a healthy rival, or even a complementary solution for those who simply don't need the over-rich environment of Windows. Some even say that predicting the defeat of the PC by the NC is courting disaster for the latter.

NCs from Digital (StrongARM) and Funai (an Acorn NC licensee) were the primary NC vendors to demonstrate Oracle 8 at the Radio City launch.

Corel creates new company

The Corel Corporation have spun-off the team working on their StrongARM-based portable NC to create the new subsidiary called Corel Computer Corporation. The Canadian Corel company is best known for their drawing software for PCs and licenses the Windows sibling of Computer Concepts' *ArtWorks* drawing package for RISC OS, *CorelXara*. The new company will also incorporate Corel's video and networking divisions.

Press reports suggest the NC notebook is targeted in the $2,500 price bracket and the deadline is for it to be demonstrated at Comdex Fall in November. Reports also indicate the machine, unlike hard-wired NCs, will come with a hard drive so that data can be downloaded from the server and used remotely off-line.

Corel have become heavily committed to Java in other product areas and the new machine is also likely to feature Java in a big way. Although not running an Intel CPU, Windows in the form of Windows CE, a version of Windows for compact portable devices, could also be featured. Microsoft announced late last year that a version of Windows CE would be ported to the ARM platform.

Less encouraging from Corel was the announcement of an exceptional $105 million loss for their latest fiscal quarter, exceeding net sales for the same quarter, which totalled $100.4 million. However, the one-time write-off of $115 million masked a modest 15 per cent increase in sales and a $500,000 operating profit.

Acorn loves ya

As promised, this is Acorn's answer to 'Intel Inside' and 'ARM Powered' – Acorn@Heart. The new symbol and logo, which is trademarked, will be used by manufacturers of products which contain technology licensed from Acorn.

Acorn asked us to mention that the symbol was developed as an internationally recognisable sign of Acorn's innovative technology and the use of the symbol is only permissible with the strict permission of Acorn.

Even if you have permission to use it, there are strict guidelines on its use and presentation. In fact the same applies to the Acorn 'nut' logo, but there has been wide-scale variation of this logo and Acorn is determined that its new @heart logo should be unaltered, which only seems fair.

Acorn NCs hit the road

Acorn has been a hit on an Internet roadshow run be Ideal Home Roadshows Ltd, which is linked to the annual Ideal Home exhibition. The @the.mall Internet roadshow spent May and June touring shopping centres in the south of England demonstrating the Internet to shoppers.

Acorn provided 26 Network Computers and the technical backup necessary to operate the Internet Café around which the roadshow was based. Ideal Home Roadshows Ltd executive director, Patrick Hay, told Acorn User that he was immensely impressed with Acorn's ability to provide the NCs and build a network which actually worked. Prior to Acorn's involvement another household name PC manufacturer had declined to join the project because they thought the plan would be impossible to achieve.

Hay explained that the idea of an Internet roadshow had come about because commercial companies using the Internet for the first time, like supermarkets, for example, needed to reach potential users who did not necessarily have a computer at home, never mind an Internet connection. These companies would therefore sponsor a roadshow which would feature their Web sites on the Internet. The original roadshow plan involved a PC manufacturer, but technical problems and a lack of commitment saw that deal fall through and, by chance, Acorn were invited to join the project.

Acorn's involvement proved to be a blessing to the project. The people the roadshow was hoping to attract were unlikely to have invested in a computer at home but might be tempted by a low-cost Internet terminal like an NC. Hay said, 'We wanted to get ordinary people in the street to give the Internet a try for the first time and show them what it's all about.' At the same time, those well-versed with computers would still find it novel because it was equipped with NCs rather than boring old PCs.

The Acorn NC's browser did cause some technical problems at first, mainly because it is not very tolerant of badly written HTML code which many of the exhibitor companies relied upon underneath their Web sites. However, once again, Hay was very impressed at how quickly Acorn was able to fix the problems.

Eventually, Acorn's Dave Walker was able to fix any minor problems on the Café intranet remotely from Cambridge. Hay commented, 'To be honest, I was hugely impressed by Acorn's ability and willingness to tackle problems.'

A second @the.mall roadshow is planned for later this year, although Acorn may not be involved this time because of other commitments. The second leg will cover shopping centres in the Midlands and further North.

Summer specials

Iota Software and Sherston Software have teamed up to offer a combined special deal on *TextEase* and *Complete Animator*, priced as a bundle at £119.49 (a 35 per cent saving on the usual price). Iota are also guaranteeing free upgrades to a new Version 2 relational version of their *DataPower* multimedia database to all new purchasers.

DataPower 2 will be released in September. Both companies are offering home buyers vouchers which can be used by local schools to accumulate discounts towards their own future Sherston and Iota purchases.

Iota Tel: 01223 566789
Sherston Tel: 01666 840433

New training courses

Insight Training have finalised courses for 1997/98. New courses include Risc PC and A7000 Support and Servicing as well as Ethernet Planning and Design. Reserve your place now, says Gary Neale at Insight. Full course information is available on the Web at http://www.argonet.co.uk/business/insight/ or tel: 01223 812927, e-mail: insight@argonet.co.uk

Year 2000 problem? What problem?

As the end of the millennium creeps closer, the publicity surrounding the millennium bug, which could see thousands of computers go mad on January 1 2000, gets ever more hyped. We have covered it before and most Acorn users have nothing to worry about. However, Xemplar have summarised the situation very neatly and it goes like this: The RISC OS date counter won't expire until some time in 2248. Early versions of NFS as used in the Beebs expired a while ago and we believe there was a ROM upgrade for FileStores to cure the 2000 problem. !Alarm allows you to set any date up to 31st December 2247. It also handle leap years correctly.

Junior goes free

Once the best-selling wordprocessor on the Acorn platform, Computer Concepts' *Impression Junior* package is now available free of charge as a download from the CC Web site.

Impression Junior was replaced by an improved version called *Impression Style* in December 1993. If you are thinking about buying Impression Style or the full blown Impression Publisher, Junior gives you an idea of what to expect. The download file is 966K in length. Point your browser are http://www.cconcepts.co.uk

The Fourth Dimension move

The Fourth Dimension have moved. Their new address is PO Box 4444, Port St Mary, Isle of Man, IM99 7RS. Tel: 01624 836744, fax: 01624 836745, E-mail: 4D@rsenter.demon.co.uk, WWW: www.rsenter.demon.co.uk/d4.htm

A few copies left

There are still a few copies of the *First Steps in Programming Acorn RISC OS Computers* book featured as a special offer in last month's Acorn User. It's only £7 (inc p&p) – that's less than half the original price. To reserve your copy ring Jane Comber now on 01625 878888.

Casio camera survey competition

The lucky winner of the survey competition from the May issue is Andrew Warren of Crowborough, East Sussex. Andrew wins a Casio QV-10a digital camera supplied by Acorn Computers.



Sun lobbies Acorn users to adopt Solaris

Sun Microsystems have developed their own flavour of the Unix operating system — Solaris — for many years. In an effort to promote its adoption, Sun have now decided to offer Solaris source code to university students for no charge. The only catch is that you need to buy something else from Sun in order to qualify for the freebie.

Solaris already works on computers based on Sun's own Sparc RISC microprocessor platform as well as earlier Intel x86-based Sun computers. Reports indicate that Sun, a key proponent of the Network Computer movement and the inventor of Java, are targeting a number of non-PC workstation platforms, including Acorn. BSD Unix is already a popular implementation of Unix on the Acorn ARM processor platform and a port of the public domain Linux version of Unix is also available for Acorn users.

Sun say they aim to give university researchers and students hands-on experience with coding in Solaris. The Solaris Driver Developers Kit will also be included as part of the package. Barbara Gordon, Sun's Vice President for academic and research computing, commented that the move would be 'good for everyone,' and added, 'It allows students, faculty and researchers access and builds up greater expertise and knowledge across the entire community. Over the years, much invaluable Unix research has come out of universities, and this program will extend that proud heritage.'

Curtis Mathes' TVs incorporate UniView

Back in May, the US consumer electronics company Curtis Mathes announced the first of a new family of Internet-enabled TV products under the UniView brand. Acorn designed the Internet components and added features which enhance the display qualities of an ordinary TV display for Internet and Web browsing. Curtis Mathes' first UniView product was a set-top box (STB), the UniView 210, which adapted a user's existing TV. Now Curtis Mathes have announced a 36 inch large screen TV and a 55 inch back-projection TV incorporating the Acorn-developed UniView features.

The two models are the 36 inch UniView DV 360 and the 55 inch back-projection UniView PT 550. Both the UniView DV 360 and UniView PT 550 integrate state-of-the-art television features as well as telephony features which Curtis Mathes claims is an unprecedented combination of entertainment, information and communication. Both TV models also incorporate a printer port.

'Incorporating the set-top box into the television gives the consumer options,' said Patrick A Custer, Chairman and Chief Executive Officer of Curtis Mathes. 'They can purchase the box to expand their current television capabilities or choose to buy a new high-end, all-in-one television eliminating the need for an additional box. Either way, they are able to screen calls with caller ID, answer the phone, send e-mails and surf the Internet without leaving the comfort of the couch.'

Acorn certainly weren't kidding when they originally described the prospective UniView products as the ultimate for high-tech couch potatoes. UniView TVs and STBs are now beginning to appear in US consumer electronics superstores. There has been no word of exporting UniView products to Europe – they would need to be fundamentally redesigned because of differences in mains power and TV broadcast standards.

Canon bundles Photo CD deal

Canon's BJC-4200 colour 'PhotoRealism' inkjet printer is now available as a Photo Editing Studio bundle. This includes a voucher which will cover the cost of a roll of film to be developed and archived digitally on a Kodak Photo CD disc. The bundle also includes photo editing software for Microsoft Windows.

For Acorn users it's a difficult package to weigh up – the printer is undeniably excellent and has printer driver support from Spacetech, at least. However, the Photo Editing Studio bundle adds £20 to the normal price of £179 + VAT. Unfortunately, this might mean that while the offer lasts, the BJC-4200 without the bundle might be difficult to find.

However, if you can get a BJC-4200 bundle at a keen price and you'd like to try Photo CD, the special deal might be just worthwhile – you can give the PC software away! Canon can be contacted at tel: 0121-680 8062, or fax: 0121-693 5070, or you can browse their Web site at http://www.canon.uk

Contacting me

You can contact the news page by writing to me Ian Burley at the usual Acorn User address or by e-mail: aunews@idg.co.uk

Early bookings for Acorn World look good

With over four months to go to the 1997 Acorn World exhibition at Wembley, (October 31 – November 2), the organisers are reporting unprecedented levels of stand booking. 'Nearly 50 exhibitors have confirmed already, considerably more than at this time last year, and we know that many others are definitely planning to come, but have not yet confirmed their stands,' said EPS Director Philip Lowery.

The improved response is thought to be due to enthusiasm for the return of the show to its traditional home at the Wembley conference and exhibition centre, combined with the knowledge that Acorn Computers are planning several new product introductions at the event.

Acorn World is set to become the stage for important new technology announcements and for the launch of eagerly awaited products to the consumer market. Goods worth over £2 million were sold to show visitors at the 1996 exhibition at Olympia and the sales analysis shows buyers were spread across hardware, software and peripheral products.

Following the tremendous success of the powerful new StrongARM processor, which was first available to the public at Acorn World '96, the company will introduce their new flagship Risc PC II computer. At least one prototype will be available, with a cinema on the stand to demonstrate the wide-ranging upgrades to the new machine.

Development of the replacement for the Acorn A4 portable continues and a much enhanced development prototype will be available for demonstration at the show with the possibility of an announcement of price and availability during the event. Meanwhile, Acorn World will be the first major public outing for the reformed AcornSoft (see other story).

Other points of interest at the show include Acorn's newly launched LanTV technology (see last month's news) which will be on show at Wembley. LanTV is a client/server digital TV and interactive multimedia solution for office networks, hotels and cruise ships. Of course, the presentations in the theatre by Peter Bondar (now Senior Vice President of technologies and engineering) and Chris Cox are now a major feature of the event. Peter will detail the latest technical developments, while Chris will cover the latest range of hardware and software products.

Acorn are now focused to project one strong brand in the marketplace, and the last year has seen the growth of much greater marketing muscle. So much has happened to Acorn in the last 12 months, and it will all be on display at Acorn World.

Acorn World advance ticket promotion

Prizes with a retail value of around £2000 are offered in a competition exclusive to purchasers of Acorn World advance tickets. In addition to great savings on the entry price to the exhibition, you could win the star prize of an Acorn NetStation network computer and a six month Internet subscription with Argonet or any one of the dozens of valuable prizes of Acorn hardware and software from the top developers and suppliers listed below.

Just answer the easy questions on the competition form supplied with your tickets and send it to Argonet, or hand it in at the show. Prizes will be drawn at the Argonet stand on Friday, Saturday and Sunday, and all correct entries will be included in every draw.

Top Acorn supporting prizes from: Acorn User, Alternative Publishing, ANT, APDL, Archimedes World, AVP, Castle Technology, Circle Software, Dalriada, Pineapple, RComp, Softease, Spacetech and Werewolf.

Entry forms can only be obtained with advance tickets, one entry per ticket. Prices are:

Adults: £9.50 (on the door), £6 (advance)
Minors: £7 (on door), £5 (in advance)
Families: £22 (on door), £16 (in advance)
An advance ticket hotline is being operated now on 0181-982 6500.

NetProducts launches consumer NC

NetProducts, a UK-based company dedicated to Network Computing products, announced they have started shipping the NetStation, which they claim is the UK's first Internet set-top box.

Both Acorn and the Argo group might contest that assertion as Acorn-sourced Network Computers (NCs), which are similar in specification to NetProducts' NetStation, have been on sale for about two months at the time of writing.

Nevertheless, the news is positive for Acorn. NetProducts is a sister company to NetChannel, an Internet Service Provider dedicated to users accessing the Internet via TV.

Both NetChannel and NetProducts are companies which were formed by, among others, Hermann Hauser, an original co-founder of Acorn. NetChannel will provide the Internet access service for NetStation customers.



The £299.99 NetStation features an ARM 7500 chip and is based on Acorn's NC reference platform design for Oracle/NCI and plugs into an ordinary TV using either a Scart connector or a standard aerial socket. A 33,600 bits/sec (bps) modem provides the Internet connectivity.

One of the investors in NetProducts is Hong Kong-based Wong's Electronics which some Acorn User readers with long memories may recall, used to assemble BBC Micro motherboards.

David Martin, NetProduct's Chief Executive Officer (CEO), points out that just 11 per cent of homes in the UK have PCs equipped for Internet access. The message is that a lot of people want to connect to the Internet but not all of them want to use a PC. 'The PC cannot perform this role. The NetStation, by using the TV, will be that product,' said Martin.

NetStation outlets will initially include selected Tempo electrical stores, the Carphone Warehouse – better known as a mobile phone supplier and Harrods, the luxury goods department store. If negotiations are successful, you will soon see NetStations on sale in the Dixons/Currys group stores.

Confusingly, a spokesman for NetProducts was quoted as saying that the initial version of the NetStation, which is missing Java and Oracle/NCI smart card features, was brought out early in order to beat the bulk of Intel/Microsoft-based NetPC products to market.

NetPC is a compact stripped down PC designed for lower cost Internet or intranet (private Internet) use. The confusion lies in the fact that NetProducts have clearly aimed NetStation at the consumer while NetPCs are considerably more expensive (c.£800) and are aimed at medium to large businesses.

NetProducts on the Web can be found at http://www.netproducts.net

Irlam upgrades Risc TV

Irlam Instruments has announced two upgrades to *RiscTV*, the hardware and software TV and video on the desktop package for RISC OS computers. Keying is now featured which allows the RiscTV display window to be overlapped or covered by other RISC OS windows while maintaining its real-time overlay.

The other change applies to the audio system – NICAM stereo decoding, 16-bit stereo sampling and software controlled audio mixing, volume and tone controls have now been added.

The display keying module is priced £49.94 including VAT and delivery. The sound upgrade package, including the keying module, is priced £179.19 inc VAT and delivery. Irlam Instruments can be contacted at tel/fax: 01895 811401, e-mail: info@irlam.co.uk, WWW: http://www.irlam-instruments.co.uk



The Internet is your photo finisher

Fujifilm have launched a digital photo printing service on the Internet. Quite simply, you digitise your photo, either using a digital camera, scanner or video digitiser, then send the photo via the Internet to Fujifilm who print the image onto high quality glossy paper and post it back to you.

The service, called Fotonet, offers a 48 hour service and Fujifilm say you won't get better quality anywhere else as it uses their state of the art Pictrography 3000 digital colour printing system which is capable of continuous tone printing at 400dpi.

For £7.99 inclusive price, you can have one, two or four images printed onto a single A4 sheet. To submit your image you need a Web browser to log into the Fotonet Web site at http://www.fotonet.com Payment is by secure credit card transaction at the time of submission. The service is run by Fujifilm's professional division and they admit there is a service under trial which is primarily aimed at professionals, but there is no reason why non-professionals can't use the service.

Fujifilm appear to recommend that JPEG compression is used to compact the file size of images before sending, with the advice not to over-compress the image as quality will correspondingly deteriorate. The press release talks about Mac and PC users, but the interface is standard HTML/HTTP Web browser, so it is likely that Acorn users will be able to use the service as well. However, this has not been confirmed at the time of writing.

Fujifilm can be contacted at tel: 0171-586 5900, fax: 0171-222 4259.

iiyama nears the £1,000 threshold

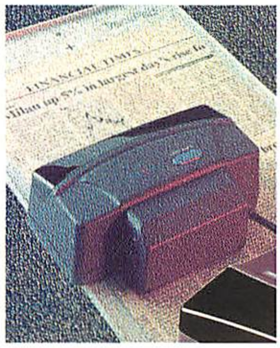
A quality 21 inch colour monitor with all the latest features is now within a whisker's breadth of £1,000. iiyama's Vision Master Pro 500 model MT-991 boasts a sharper electron beam by using a shorter focal length electron gun. Elliptical beam correction also maintains sharpness into the corners of the screen.

The monitor has a maximum horizontal scan rate of 110MHz and can support a maximum resolution of 1800x1400 pixels, or 1600x1200 at a refresh rate of 85Hz. Both BNC and 15-pin D connectors are supported. The tube itself is a Mitsubishi DiamondTron. The tube geometry is similar to Sony's Trinitron tubes which only curve in one plane for a less distorted display and a better control of reflections, but using a more conventional electron gun arrangement.

A high resolution on-screen settings display is also featured, as is TCO-95 radiation emission compliance. Included in the price is a one year on-site maintenance deal, plus two years return to base. All this condenses into a £1059 typical selling price (plus VAT). Most of us, including you news editors, can but dream of such luxuries – even at iiyama's price, but it's a nice dream, nevertheless. iiyama (UK) Ltd, tel: 01438 314417, fax: 01438 311975.



Don't buy a black & white Hand Scanner!



Presenting a very good reason not to buy a black & white hand scanner. **ColourMobile** is a motorised colour scanner that scans automatically, and works directly from bi-directional parallel ports, so you don't need a special expansion card. It also provides a pass-through port for printers and dongles etc.

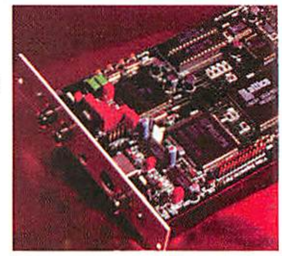
- 24 bit scan head: 16.7 million colours & 256 greys.
- Resolutions from 100 to 400 dpi (interpolated).
- Scan width 104.6mm (4.12").
- Works with printers, dongles & CD-ROM drives.

"Intuitive and remarkably easy to use... scans are outstandingly sharp with excellent colour accuracy. What more can I say?" - Archimedes World.

Special price £125*

24i16 Multimedia Card

24 bit Video & 16 bit Sound



24i16 combines an advanced 24 bit video digitiser with a stereo 16 bit sound sampler. As well as beautiful stills, **24i16** captures Replay movies and hi-fi audio samples.

- S-VHS or composite inputs.
- 1Mb framestore captures still images at full PAL resolution, 768 pixels x 576 lines.
- Replay movies (including sound) can be recorded, image size and frame rate are fully adjustable and limited only by hard disc and system bandwidth.
- Sound sampler records at sample rates up to 48kHz.
- Hardware video scaling and anti-aliasing, plus real-time control of brightness, contrast & saturation.

Price £472.94*

New Upgrades

Risc TV

The *Award Winning* Desktop Television System is only £298.45!*

Risc TV allows you to watch full-size or scaled TV (from the on-board tuner or other video source) in real-time on the desktop in true colour. It does not suffer from the usual drawbacks of slow update and/ or small image size, because this unique digitiser uses dedicated hardware to handle screen refresh. This also means that the video display shows millions of colours in any mode and it even works on A5000's! Of course you can also use **Risc TV** to grab still images and future expansion is catered for by special feature connectors.

- On-screen sizes of over 1024 x 768.
- No DMA slot required.
- Real-time scaling, filtering and control of contrast, brightness and saturation.
- TV tuner fitted as standard.
- Auxiliary inputs for Composite & S-Video.
- Teletext option is available at low-cost and there are now two major new upgrades:

Keying Module allows **RiscTV's** video window to be obscured by other objects and still provide real-time overlay.

Audio Upgrade includes NICAM decoding, external audio input, 16 bit stereo sampling, audio mixing, volume and tone controls.

Updated software provides Replay movie capture and support for the new upgrades.



For the Complete Picture...

Irlam Instruments Ltd, Brunel Institute for Bioengineering, Brunel University, Uxbridge, Middlesex, UB8 3PH. Tel/Fax 01895 811401.
Email: sales@irlam.co.uk Website: www.irlam-instruments.co.uk

*All prices are for packages fully inclusive of hardware, delivery and VAT.

Please note: All products require RISC OS 3.1 or later, a hard disc & 4Mb RAM is recommended. Check suitability for your computer before ordering. All hardware products have full 1 years guarantee. E & OE.

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Email: acesales@plaza-project.de

Near professional colour at near inkjet print costs

Have you ever wanted a short print run of a full colour document but had neither the time to churn it out at 720dpi on your inkjet nor the money to have it printed professionally?

I have found myself in this position on numerous occasions without the solution of a fully Acorn supported bureau offering colour laser printing. Micro Laser Designs, one of the leading Acorn reproduction houses, has released news of a full colour laser printing service for your Acorn files using its A3, Postscript II Canon laser proofer.

The resolution of most colour laser printers and photocopiers is less than you would expect from professional printing, but the results are superior to any desktop colour inkjet and cheaper per copy than offset lithography.

Professional litho printing only becomes cost-effective when printing thousands of full colour pages while Micro Laser, just like many other bureaux dedicated to Mac and PC, charges a small set-up fee from £2.50 and just 65p per copy if you print 100 or more A4 prints.

Draw, *Sprite*, *TIFF*, *ArtWorks*, *Ovation Pro*, *Impression* and many other filetypes can be output from Micro Laser's StrongARM linked to its Canon CLC colour copier. If the press release demonstration page was anything to go by, the results look as good as the value of the service.

Alternatively, if you wish to possess your own 1200x1200 dpi colour printer to use at home or in the office whenever you desire, then Tektronix may have just the device for you.

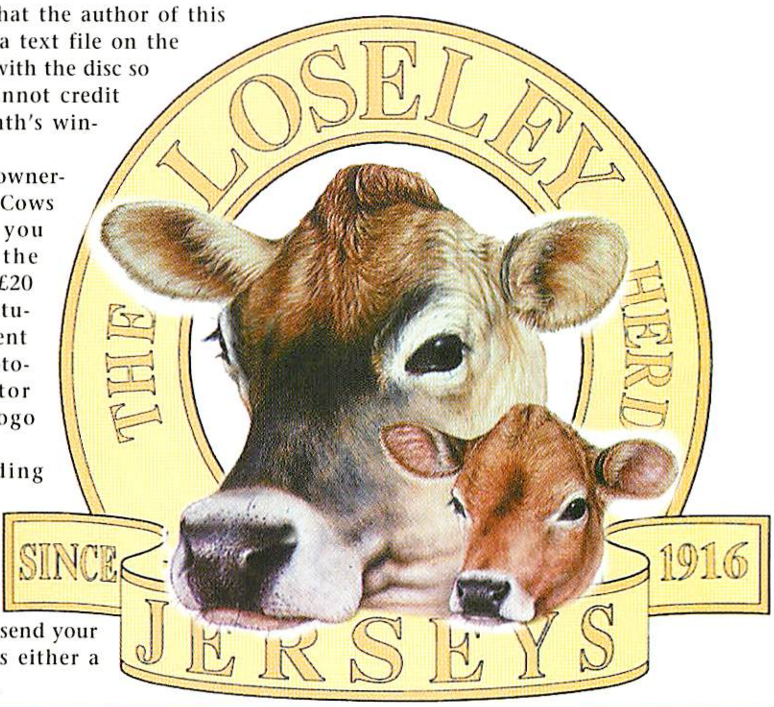
Their new Phaser 560 colour laser printer with a minimal memory system costs under £4000 + VAT and can print 5ppm in full colour at 600x600dpi. The plain paper output that I have examined from the Phaser 560 is superb and for any organisation or business regularly producing full colour, short run print jobs in a hurry, this laser printer would be an excellent, cost-effective solution.

Pic of the month won by Unidentified Cows

It is such a shame that the author of this image did not send a text file on the disc. No letter came with the disc so unfortunately we cannot credit anyone for this month's winning pic.

If anyone claims ownership of the Loseley Cows please write in so you may be awarded the massive windfall of £20 and be fully congratulated on this excellent combination of photographic and vector imagery for a logo design.

Please keep sending your designs to me at the address below if you'd like to be featured on the Graphics page. And do remember to send your name and address as either a text file or in a letter.



Contacting me

You can contact the graphics and DTP page by writing to me, Jack Kreindler, at *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to augrafix@idg.co.uk.

Recycler

Although this is not directly relevant to this column, I thought I would sing the praises of a newly released software product which I'm sure will benefit graphics and DTP users. *Recycler* from Fabis Computing is a little utility, like *BlackHole* and a couple of others, which can capture filer deletes and – as on the Mac or PC – lets you undelete them.

It can be devastating to accidentally destroy a much loved graphic or important document – and all with just one accidental mouse click. Recycler has an excellent front-end and a useful 'recycle' facility which puts files and even directories back where they were deleted from. A full review will be published soon.

Fabis Computing
Tel: 01283 552761

Snapshot+

Irlam Instruments, hot on the heels of Spacetech's *Photolink*, have announced the latest version of their generic digital camera driver. *Snapshot+* now supports all cameras from Epson, Olympus and Sanyo. An innovative feature of the new driver is the ability fo record timelapse photography as Replay movies, and with the camera plugged in directly to the computer the movie length is not limited to the storage capacity of the camera. It costs £49 + VAT but is free with any camera bought from Irlam.

Irlam Instruments
Tel: 01895 811401

German Photodesk

Spacetech, in an effort to address the needs of the considerable German graphics market, have produced a Deutch version of *Photodesk 2*. Despite being of German descent, I'm afraid that my command of the language is not sufficient to comment on the quality of the translation, though one hopes that it is not in the same vein as *TopModel*'s translation into English.

Spacetech
Tel: 01305 822753

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Simply select your preferred computer base, then add options from list below, eg.Monitor,PC card All Computers are built and tested before dispatch, with printers and software purchased, installed as required at no additional cost

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Acorn AKF93 £423.00d
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Iiyama 17"MT9017E .25dot £639.00d
Microv 14"1438 (AKF50) £289.00d
Microv 14"1450 (AKF60) £219.00d
Microv 15"1565 .28dot £299.00d

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A5000 4mb 210HD base only £475.00d
RPC600 8mb + 1 Vram 420HD 2xCD base only £700.00d
AKF17/30/40 monitor £125.00d

Risc-PC Upgrades

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Risc OS Upgrade Chips £36.00a
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IDE 2.5"
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CD Software

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Ancient Lands (IMS) £44.00b
ArtWorks (CC) £99.00c
ArtWorks Clipart I (CC) £20.00a
ArtWorks Clipart II (CC) £20.00a
Being a Scientist (Anglia) £44.00a
Bitfolio Ed7 (Lino) £50.00c
Breakaway Maths (YITM) £70.00b
Britain from the Air £44.00a
Britain Since 1930 £28.00a
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Guardians of the Greenwood £54.00a
Granny's Garden (4Mat) £35.00a
Garden Wildlife (Anglia) £44.00a
Hutchinson M/Media £45.00a
Industrial Revolution (Anglia) £94.00c
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ANT internet (ANT) £109.00b
Apple FS Sale (Oragan) £30.00a
Arcfax (David P) £33.00a
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C++ (Acorn) £249.00c
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Adventure Playground (Storm) £21.00a
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TalkingRhymes1 (Topo) £26.00a
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Time Detectives (Sher) £49.00a
TinyDraw/Logo (Topo) £25.00a
TinyPuzzle (Topo) £20.00a
Teddy Bear's Picnic (Sher) £31.00a
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Alone in the Dark (Krisalis) £29.00a
Aries *4games* (GamesWare) £25.00a
Anagram Genius (4D) £27.00a
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Battle Chess (Krisalis) £24.00a
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Black Angel (4D) £28.00a
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Chuck Rock (Krisalis) £10.00a
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James Pond (Krisalis) £10.00a
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(Revelation, Mad Prof Mariarti, Terramex,Pipe Mania)
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(Apocalypse, Holed Out, Olympics, Inertia)
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Simon The Sorcerer CD(G/W) £41.00a
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subject to availability

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StartWrite (AP) £8.00a
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Credit Cards: you may also pay byVisa, Delta, Euro, Switch, Electron, or Master Card. We normally make no charge for this, and take no payment until goods are ready for dispatch, We need the card holders address and telephone number, card number and issue number if any and the expiry date.

Carriage: charges are as follows
a Small £1.25
b Medium £2.50
c Medium Recorded £4.50
d Courier £10.00
e Courier Large £15.00

Official Orders: are welcome from UK education and government institutions (invoices are due for payment within 14 days and are subject to carriage and late payment charges).

VAT is included:

Order Address: please send your orders to;
Davyn Computer Services
'The Workshop'
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Opening Hours:

Monday	9.30 - 5.30
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Wednesday	9.30 - 5.30
Thursday	9.30 - 7.30
Friday	9.30 - 7.30
Saturday	9.30 - 5.30

Terms: All products, prices and specifications are offered in good faith and are subject to change without notice. We Process all orders immediatly, but suppliers do sometimes keep us waiting. Goods are guaranteed but are not supplied on approval. Returns and cancellations can only be accepted by prior agreement and there may be a restocking and administration charge A full copy of our terms are available upon request.
E.&.O.E 16th July 1997

Key # to join the Viewdata revival

Hands up all those that can remember *Micronet*, *SoftMachinery*, *Viewfax 258*, DRYDEN, *77# AND KEY 1 TO STORE MESSAGE, KEY 2 TO ERASE? If these all mean nothing then you've missed out on one of the seminal eras of computer comms in the UK. The heady mid-1980's days of *Micronet* on *Prestel's* Viewdata service were when many former BBC Model B computer users got bitten by the comms bug, myself included.

Remember how we used to dial *Prestel* using the phone first, then wait for the tone and flick the little toggle switch on our Prism 1000 1200/75 baud modem to 'line' hoping that the carrier light would 'catch'? Prestel wasn't the only ViewData system worth calling though because there were other privately run Bulletin Boards too. I've still got my Prism modem and my BBC computer up in the boxroom, but now I can use my Risc PC to join in with the Viewdata Revival.



The Viewdata Revival starts here

James Coates, James Cronin and some of the 'names' of the Acorn comms world have been working to get a Viewdata BBS called Heaven up and running with Telnet access from the Internet. Heaven uses Gareth Babb's *Vhost* BBS software and Hugo Fiennes' *TelnetIn* server allows Internet users to Telnet to it. Viewdata was always renowned for being colourful and fast and is still familiar these days as Teletext on your television.

Acorn owners using the *ANT Suite* or *Acornet* for Internet access can download a 'plug-in' Viewdata client called *HippoTerm* from the Heaven Web site which has been written jointly by Gareth and Hugo. PC users can also download several Viewdata clients from links on the Heaven site. To log in to the Heaven Viewdata BBS, the telnet address to enter is heaven.affection.net on port 23.

Why bother with all this? Well, as James Coates says, 'Running a BBS is great fun. It's a world away from the billions of articles which flow through usenet, more pretty than telnetting to a talker, and less risky than chatting to a random person on the other side of the world.' The odds are high that you will actually know the other callers to a BBS and, by Internet, it's probably only a local call away. You might even revive old friendships from the '80s.

Heaven Viewdata BBS
WWW: http://www.heaven.affection.net/
TELNET: heaven.affection.net,23

Fresco frenzy

ANT Ltd have released *Webtool*, a utility program that allows you to download and save an entire Web site or selection of pages from a site with all the page elements so that you can view it off-line using your ANT *Fresco©* Web browser. *Webtool* costs £25 + VAT. Another result of ANT's recent development frenzy is the latest release of *!Inetsuite*, including updated versions of the *Marcel* mail/news reader and their *Fresco©* Web browser featuring the long awaited Frames support.

ANT Ltd
WWW:http://www.ant.co.uk/
Tel: *01223 567808*

Acorn Awareness

The Acorn Awareness Group has been formed to carry out an organised campaign targeting the media in an effort to increase awareness of Acorn's technology and success and to keep them up-to-date with all the latest developments — and correct them if they get things wrong. You can help by telling the group interesting ways in which you are using an Acorn and why an IBM PC clone wouldn't be up to the job.

Acorn Awareness Group
E-mail: acaware@ursaminr.demon.co.uk
WWW: http://www.ursaminr.demon.co.uk/acornaware/

Beyond x2

The US Robotics Technical Support BBS in the UK now offers free x2 56K upgrades to USR Sportster Flash and Courier V34 modems. In North America, USR has pledged that existing x2 technology products will also be upgraded free of charge to the 56K modem standard to be adopted in 1998 by the International Telecommunication Union (ITU-T), and that this will hold for consumers, ISP's and corporations. If this is also to apply in the UK, Demon subscribers with presently unusable USR x2-capability can start rejoicing!

USR BBS
(0118) 969 2200
USR Websites
http://www.usr.co.uk/
http://www.usr.com/

YoUR List of Web wonders

http://www.geocities.com/SiliconValley/Park/4119/armsi.htm
David Sharp's support page for the forthcoming new version of the popular public domain ARM processor speed indexer *ArmSI*.

http://www.fortunecity.com/westwood/mugler/7/index.htm
Another David Sharp effort is The Acorn Filetype page, with download links to utilities such as *TypeInfo* and Denis Howe's unofficial Acorn filetype list.

http://www.humperdink.demon.co.uk/index.htm
Carl Scarlett's Homepages introducing the 3rd Bromley Boy's Brigade company and the University of Nottingham Gilbert and Sullivan Society.

http://www.acorn.co.uk/developers/explan/
The Christian Acorn users group, sponsored by Explan Computers Ltd

http://www.jesusfreak.com/britlinks/
James Stewart's Links to British Christian bands.

http://www.gamecenter.com
All the Game news from CNET, tell them about Acorn machines will you?

http://homepages.enterprise.net/aok/gs3.html
Games Scene section of *Digital Oasis Webzine*, with exclusive downloadable demo of *Wizard's Apprentice*.

http://www.werewlf.demon.co.uk/quintin/code.html
Quintin Parker's Acorn supplement to the geek codes – those funny symbols at the ends of Usenet signatures.

http://www.marketto.demon.co.uk/hardback/
Support site for Theo Markettos' Shareware hard disc backup utility *HardBack*. Download the demo version here too.

http://newton.ex.ac.uk/general/ug/norman/
Phil Norman's Exeter University site featuring his Freeware Acorn software: *Dicottery*, *Duet*, *StarBoard*, *Locate* and more.

http://www.argonet.co.uk/zfc/zfc.html
Danny Kilgariff's history of the Zimmer frame Club, the Argonauts' register of users who are at least 50 years old.

Contacting me

Keep sending me interesting URLs for the next yoUR List by e-mail to david@arcade.demon.co.uk, or mail #2 on Arcade BBS 0181-654 2212.

Palette

When RISC OS moved to version 3.5, the palette control disappeared from the desktop making it awkward to adjust desktop colours. Frank Hertel has produced a Freeware replacement so you can go back to the days of green text on pink backgrounds. *Palette* is on HENSA as package code f014.

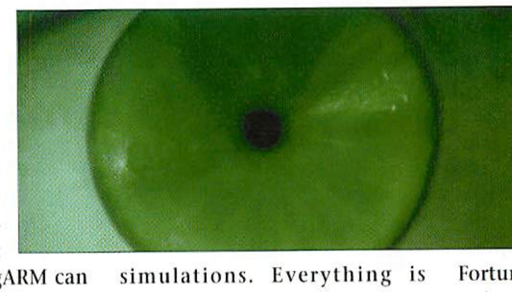
GIF viewing

Two new utilities for viewing animated GIFS come in the form of *Replay GIF* and *Animate*. These are handy for checking animations are right before adding them to your Web pages. Both work well, but Animate, by Peter Hillam of Square Eyes Software has the edge with one or two more features. Both use code from Peter Hartley's *Intergif* software. They are on HENSA as package codes f017 for Replay GIF and f031 for Animate.

Scene WebZine

A reunited demo team from the C64 years are starting up a new magazine on the Web all about the demo scene. The Comic Pirates are covering all formats including PC, Acorn, Amiga, Atari and C64, and are interested in articles and information for the site. Don't let the Acorn scene down in front of our competitors – get on the Net and contribute. Further information can be found at http://www.scene-central.com

Era we go



The Xperience are back with a new demo that mixes the style of a great production with code that shows what the StrongARM can really do. There's no question that *Era* is a big step forward for the Acorn demo scene. The demo fans at this year's Siliconvention demonstrated this by voting the demo into first place in front of excellent productions like Frank Foehl's *Iron Dignity* demo.

In preparation for this review I grabbed a pen and paper and ran Era again with the intention of looking it over one more time and making a note of all the main effects. I found myself writing non-stop and scrambling for another bit of paper half way through when I'd run out of room. The demo is literally packed with fx that zoom past at a fast rate. Pace is important with a demo and TXP have got it just right in Era.



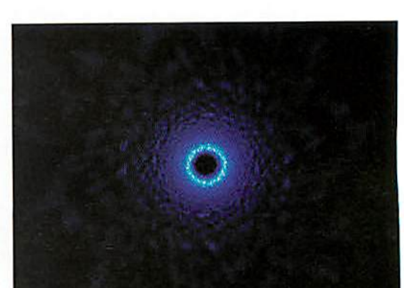
The demo begins with some nicely trailed vector objects which spin in to form the TXP logo, while a lens flared light source scrolls past in the background. This is followed by some trailed 3D fx that are all linked together with smooth blurring. Next up is a trailed galaxy that morphs to the bottom of the screen and is replaced by a bump mapped planet. The list of fx goes on and on, but other highlights include the double-layered tunnel and smooth liquid simulations. Everything is nicely linked together and is rounded off with a very original vertical scroller to give the credits.

Running in a 256 colour mode while taking advantage of the definable palette provides good graphics at a speed which even a pre-SA RPC machine can just about cope with, but you need a StrongARM to see the fx in their full glory. Without it the frame rate is a little low in places, and there are one or two nasty breaks here and there. Other than that, TXP have created a good balance. It takes advantage of the SA and pushes things forward, while remembering all those without the new processor.



Many of the effects use trails or transparency which is attractive to view but also technically impressive. On further examination it appears that TXP run the entire demo in 320 x 480 screen resolution and use the high vertical resolution to interlace the different frames to create the two levels of transparency — a clever cheat which I didn't spot until I looked at the screen-shots. Where the extra resolution is not needed, every other line is simply missed out, giving the impression (and speed) of a 320 x 256 resolution.

The music begins with a covered choral chant before dropping into the typical dance music feel of most TXP demos. The music is generally pretty good despite being based in this rather cheesy techno-trance genre yet again. Fortunately though it has been written in conjunction with the demo coding. This means that it's linked in with the visual effects very well. There are plenty of breaks and dramatic strings and hits at crucial moments, punctuating and emphasising the graphics well.



Unfortunately, as with TXP's last demo, I have to round off the review on a low note. The group is still insisting that PD libraries pay for a £40 licence before they can distribute what is otherwise a Freeware production. As the Internet takes off, PD libraries are starting to struggle and don't need further problems from PD authors. Please re-think your strategy guys.

Era is available direct from the Siliconvention Web site at: http://www.siliconvention.com/index.htm An extra graphics pack to add a ray-traced end sequence is also available. Icebird's second place entry at Siliconvention has also been released and will be reviewed next month.

Pass me Drivin'

Pass me Drivin' is a classic example of a good program idea let down by poor programming. The aim of the program is to test the user on the main parts of the highway code usually featured in a driving test. A range of tests are presented using signs and textual multiple choice questions. The user answers by clicking on the correct picture or answer. Correct answers boost your score, and incorrect ones take it away. If you get it wrong you get another chance, so you eventually discover the right answer and hopefully learn from the experience.

The problem with the application is the way it has been designed and programmed. To begin with, it runs disastrously on a Risc PC. Everything goes way too fast on the startup and menu section, and it's actually very easy to click on an answer box which changes to the next question so fast that you end up answering the following question as well as the one you're on. Never mind the fact that you need *GameOn* running to actually get it loaded. Compounding these problems is the fact that the program forces you to listen to one of the most annoying pieces of music ever composed.

It's always hard for a programmer to know how a program will run on a faster computer if they haven't got access to one, as was obviously the case here. It's therefore essential to base all timing on the internal clock, so pauses don't disappear when using a fast computer.

It really is a shame that these things let down the program which, with a few relatively easy modifications, could be so much better. Pass Me Drivin' is shareware and registration can be obtained from Ioan Evans for £5 from 43 Western Road, Pontardawe, Swansea, West Glamorgan, Wales, SA8 4AJ. A demo version is available from Five Star Marketing on disc ED7A1.

Xperience Web site

In line with the new demo release, The Xperience have completely re-designed their Web page with all-new graphics and text.

The design is restrained but nicely produced, and the rather arrogant writing style of the old site has almost disappeared. Content-wise, there's plenty of information on the crew and their aims, with a few hints about new productions on the way. It can be found at: http://www.stud.uni-hannover.de/~bcl/xperience

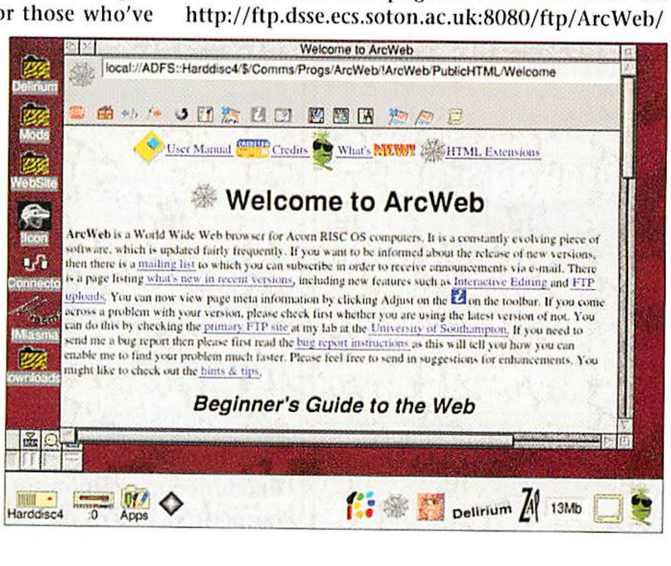
The site raises an interesting question about the Acorn presence on the Web. Except for a couple of demo sites, I've seen virtually no evidence of professional or stylish design. Why is it taking so long for Acorners to get their act together? Admittedly it's not the most important aspect of Web browsing for everyone out there, but it seems to be a crucial way of putting across a serious and professional impression.

ArcWeb

Several readers have asked why I haven't given *ArcWeb* much publicity in the column and, despite giving it first place for PD software in the *AU* awards, I have to admit that it hasn't received quite the attention it deserves. To put that right, here's a little re-cap for those who've never used it.

ArcWeb is an excellent Freeware Web browser written by Stewart Brodie that represents a good example of a full-blown application released into the Public Domain. The most crucial thing for this kind of program is support. With the rapid advances and changes in the HTML standards, it's important to keep up with the times, and Stewart has done a great job of regularly updating the program. The latest version (1.87) supports frames and this is being developed further for future releases.

Some people have criticised ArcWeb for its lack of speed, but personally I find it essential as a browser and as a first-time viewer in conjunction with *Zap* for Web design work. ArcWeb can be downloaded from Stewart's ArcWeb pages on the Internet at: http://ftp.dsse.ecs.soton.ac.uk:8080/ftp/ArcWeb/



Pdf update

Following all the interest in Leo Smiers' Adobe Portable Document Format file viewer, the program has been updated to version 0.64a. The updates include: Choices that can be saved, 32000 colour Sprites for Risc PC users, no bar icon (if you want), the addition of very basic text export, rotate output, dashed line support (since version 0.63b) and the memory leak has been fixed. Future enhancements will include text search, better text export and being more PDF 1.2 compliant. *Pdf* can be found at: http://www.knoware.nl/users/lsmiers/index.html

Stop Press

The Revelation 97 demo competition took place at the Acorn South East show on July 5 and I can report that it was a great success. Winners of the demo competition were the 'Nutters', led by coder Chris Hubball, who bagged a well deserved top prize from Acorn with their stylish *Fluoro* demo. Close competition came from DFI and Kulture, with five entries in all. The music competition was also popular, Toby Gill taking first place winning the excellent *MelIDI* from Liquid Silicon. A full report and some demo reviews will feature in next month's column.

Contacting me

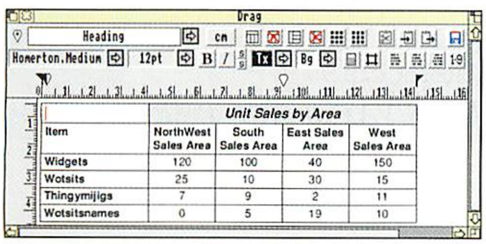
You can contact the PD page by writing to me, Paul Wheatley, at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP. Or, preferably, by e-mail to aupdpage@idg.co.uk

Tables...

Like anyone else in a business situation I have a constant need to produce tables. Tables are probably the second most effective way of presenting facts and figures after a graph and for relatively simple figures are probably more effective.

There are usually a number of different strategies most people adopt when it comes to producing a table. Mine usually involves producing the outline in *!Draw* and if the table is not likely to need amendment I then add the text and figures in !Draw as well or take it into whatever DTP/word-processing package I am using. The advent of OLE (Object Linking and Embedding) was a great help and was why I continued to use a system which could only charitably be called a workaround.

I tried other approaches occasionally — the version of *!TableMate* bundled with *!Impression* I found to be in the worst tradition of 'bundled software'. I also used the table drawing facilities within !Impression and discovered why another package had to be bundled alongside it. The facilities were not for the faint-hearted.



	Unit Sales by Area			
Item	NorthWest Sales Area	South Sales Area	East Sales Area	West Sales Area
Widgets	120	100	40	150
Wotsits	25	10	30	15
Thingymijigs	7	9	2	11
Wotsitsnames	0	5	19	10

My needs were not being met and so I acquired a copy of the latest incarnation of !TableMate — *TableMate Designer* from Dalriada Data Technology. What a revelation. As soon as it was installed on my system I looked in the Examples directory to find the tables of my dreams. Colour, different fonts, the application of different font effects in the same cell and so on. See full review in this issue.

Many of the new features are concerned less with the actual production of the table outline than with the effects that can then be applied to the contents of the table. This may seem rather more flashy than substantial but that is how it should be. Rather than spending hours producing an outline, I could now concentrate on the content of the table. I am now an enthusiastic advocate of TableMate Designer and on that basis recommend it as a worthwhile upgrade. I say upgrade because when I contacted Dalriada and told them I had a copy of the older !TableMate I was informed that it only cost £45 to upgrade rather than the full £60. You may even still have the original voucher in your Impression box.

Dalriada Data Technology
Tel/Fax: 01926 492459
WWW: http://www.dalriad.demon.co.uk

..and chairs

If you were sat at your computer now what would you be sat on? Many people who use Acorns in business do so either from home or in very small businesses, where there is probably no Health and Safety Officer. Let me take on that role and ask you to look afresh at the conditions in which you work wherever they are.

There are both regulations and recommendations that cover the area of working at a computer which are designed for your benefit and in particular your health. Try to use the principles and apply them even if it is to the spare bedroom.

Generally speaking a computer should not endanger your health but it can if, like any other piece of equipment, it is used incorrectly. Look at where you sit and where your computer is sited. You should have room both to move and work. Look at the lighting – is it good enough, does it cast glare onto the screen, is it good enough when there is no natural light? If not then you are probably already wearing glasses or will need them in the future.

A modern computer should have a separate keyboard enabling you to adjust it and move it independent of the main computer. An A7000, A4000. A5000 or a Risc PC passes but an older A3000, A3020 or A3010 does not. Those that do not are not illegal but be aware of their inherent inflexibility.

The computer monitor should be adjustable for tilt and turn and again most modern monitors pass and should also be adjustable for brightness and contrast. The quality and size of the monitor cannot be underestimated in terms of the comfort and ease of use. Intensive graphic work on a 14 inch monitor is not sensible. 15 inch monitors are fast becoming the standard.

Perhaps the biggest aid to health and comfort when using a computer is the chair. Hence my original question. The best chair for use at a computer is probably a gas-lift, operators chair, without arms and adjustable for height of the backrest. You endanger your health by placing yourself at the mercy of a chair which will not support you.

Gas lift operators chairs have castors which makes them flexible in terms of being able to move forwards, backwards and sideways. They need not be expensive although the best ones usually are. Most towns have shops which sell surplus office furniture and these can be a source of real bargains.

One chair I have seen which offers an alternative approach is the Stokke 'Wing' chair as sold by Norwich Computer Services. There is a picture in the current edition of *Archive*. Basically it is a gas lift with castors but uses a kneel pad and no back rest. It may appear unnatural when compared to a normal chair but is particularly recommended by Paul Beverley of Archive especially for those who already have bad backs. The downside is the cost which at £420 seems a lot even with a full money back guarantee if not satisfied. I would think that those who do have back pain would consider it money well spent and those who do not would consider that prevention is better than cure.

Norwich Computer Services
Tel: 01603 766592

!NoticeBoard

The rumour at Wakefield was that there will be a new version of *!NoticeBoard* soon which will include a whole range of new features including the ability to incorporate sound and moving images and have manual control of pages. I am particularly interested in presentation software so watch this space.

The Really Good Software Company
Tel/Fax: 01582 761395
E-mail: rgsc@turnbull.complink.co.uk

Business Bundle

This may be a bit late for some of you but blame a bi-monthly business page. Acorn has now launched a new Risc PC promotion to replace the £200 trade-in for Clan members deal. The item of particular interest for business users is the Business Bundle which consists of *EasiWriter Pro*, *Eureka 3* and *DataPower* when purchasing a Risc PC. The deal is open to all, not just Clan members and will run 'while stocks last' or until the end of August.

e-Mate 300

I've seen one of these beasts, which is probably more than most as they're being sold by Xemplar and therefore only to schools and schoolchildren, although parents can also buy them through the school. Basically the e-Mate is a portable computer produced by Apple. Given the slowness in Acorn's production of an A4 replacement, anything would be welcome for those needing to compute on the move.

The software and approach is geared heavily towards education but I would certainly buy one given the chance, as they look excellent for business use especially if you find the PocketBook keyboard somewhat restricted. They cost £450 plus VAT. If enough of us contact Xemplar perhaps they may consider users outside education or those without children.

Contacting me

You can contact me, Mike Tomkinson, by post at the usual *Acorn User* address or by dropping me an e-mail at: *aubizniz@idg.co.uk*

Artisan update

As promised Acorn had a version of their new portable, the Artisan, on show at the Wakefield show. *On show* was definitely the right term as no one was allowed to touch the laptop without first getting permission from Peter Bondar.

One of the most interesting announcements Acorn made about the portable was that the rumour circulating on the internet — that an American had contracted Acorn to develop a new portable — was true. Acorn also confirmed that the American was investing a great deal of money in the project but whether the reason for the order was that the American wanted an operating system in a portable that no one else in the States used is true, your guess is as good as mine...

The machine on show was not a true portable but rather a technology demonstrator produced for their American partner. The machine did not have any local storage, booted from a network and some of the keys were blanked off in order not disclose various projects Acorn are working on for their Sugar Daddy.

The portable had a small, but very sharp, colour TFT screen. The mouse was in the form of a small, red, pressure sensitive ball-shaped object in the middle of the keyboard — similar to most PC laptops — with two mouse buttons situated in front of the keyboard. The much hyped case was, in my opinion, a bit of a disappointment — it was quite large and not particularly stylish but I was assured that this was not necessarily the finished version.

The portable is still on target to be released by the end of 1997 and despite a few reservations about the case the new laptop looks like being an excellent replacement for the A4.



Widget News

Widget News is the newsletter of Widget Software — one of the largest Psion dealers in the UK. It comes out twice a year and is available free to anyone who wants it. The newsletter contains all the latest news from the Psion world, reviews of the latest software, case studies and much more.

To subscribe to Widget news either write to Widget Software, 121 London Rd, Knebworth, Herts. SG3 6EX or point your browser at http://www.widget.co.uk/wnews.htm If you have Web access and MS Word for Windows/Mac you can even download future issues before they are posted out.

Schedule utilities

Schedule has always been one of the most useful programs included in the Pocket Book's applications suite. Recently a number of programs have come to my attention which enhance an already superb program. All the programs mentioned below are available for download off the Web at http://www.kurzbyrn.demon.co .uk/psion.htm

Hol

Hol is a program for the PB/Psion 3a that calculates dates for holidays and writes them to your Agenda. The program works by reading a holiday definition file, calculates dates for holidays according to the file and writes them into Agenda. The user interface allows you to select which years to calculate and preview the dates before writing them into your Agenda file.

The program can handle all types of holidays regardless of whether they vary each year like Easter, are on fixed dates (Christmas) or are fixed relative to other dates. The program allows you to define a style and year symbol for each holiday.

The program contains definition files for holidays in numerous countries around the world including the USA, Uruguay, Norway, UK and many more...

AgnMerge

AgnMerge allows you merge up to seven Agenda files forming one complete file. This could be useful, if you have started a new Agenda file and then wanted to merge it back into your original to have a complete record. The program is fully configurable and allows you to determine what is kept and what is discarded. You can also specify the dates between which you wish to merge files.

AgnTidy

AgnTidy is a utility that removes dead data from Agenda files hence reducing the size of the file and improving the performance of the application.

When an entry is repeated, space can be quickly taken up in a number of ways especially if repeated entries are edited. The program will go through your Agenda file finding any records which could be simplified or deleted and will do the honours.

Agenda Dump

Agenda Dump is the most useful of the four programs as it allows you to print out Agenda files. The range of entries to be included in the report is determined by a filtering system which allows you to configure the dates, types of record etc you wish to output. The program then outputs the data to a printer via the relevant lead (or to a database file or the screen if no printer is available).

Overall these four applications complement *Schedule/Agenda* very well and will come in very useful to any regular user.

3-Lib update

3-Lib, one of the largest shareware libraries for the Psion, has moved Web sites. The new address is http://3lib.ukonline.co.uk/ The site has links to various other Web sites, reviews of Psion software, updates and news on the author's own software and much more. The site is run by Steve Litchfield and was recently voted the best Psion-related Web site by *Palmtop* magazine. Well worth a visit.

Contacting me

You can contact the Portables page by writing to me, Mark Taylor at *Acorn User*, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to auport@idg.co.uk

cover disc



Marsquake II



Paul Taylor

As one of Earth's leading demolition and salvage experts, you have been contacted by a research station based beneath the surface of Mars. It seems they've had some trouble with rockfalls, and are quite eager to have you come and rescue them from their predicament.

Four sections of their base have been crippled by the rockfalls. It is up to you to clear the blockages so repairs to critical systems can begin.

Single player

There are 32 levels within the Martian base that require your attention. You must clear all rockfalls from each of these, along with any mobile entities that may be roaming around. These could pose a threat to the repair crews. The levels are seperated by energy barriers which will be released when the level is clear. Leave through the exit guarded by the energy barrier to progress to the next level.



To clear the rockfalls, you are equipped with an explosive generating backpack supplied with energy cells for one low power bomb per power recharge. Drop the bomb near a rockfall then make sure you get out of range of the explosion. Be quick — you only have a few seconds before it goes off.

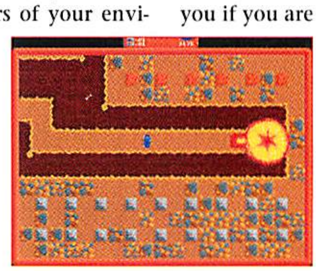
Destroying the blockages may reveal extra utility cells for the backpack. These will give you larger explosions, extra bombs per power recharge, or other special abilities.

The push ability allows you to push a bomb that has already been dropped by walking into it. It will continue to roll until it hits something or explodes. If the bomb was dropped with the rebound bomb utility cell, it will bounce back off walls or other bombs — be careful! Pressing the secondary fire button will stop the bomb wherever it is.

The throw ability lets you pick up dropped bombs and throw them over blockages. To do this, drop a bomb, then press the fire button again while standing over the bomb. This will pick it up. You can then carry it for as long as you like — the timer won't start ticking until it's thrown, by pressing fire once more.

Along with rebound bombs, other bomb types are available. Mega bombs create huge explosions and can crush a player if the bomb rolls over them. Blasts from flower bombs can spread around corners near to the centre of the explosion, so make sure you are well out of the way of these. Flower bombs can malfunction, sending a large cloud of flour into the air by mistake. This can be unpleasant if it gets through the air filters of your environment suit.

Some utility cells have no identification and you can only find out what they are by picking them up. Some are good, such as extra lives, while others aren't so good, like fuel leaks. If the effect of the cell is not immediately clear, it will be identified on your status panel. Negative effects will cease after a few seconds.



Several types of enemies will be encountered. Security droids will disarm bombs on contact — the red variety will also disarm you on contact. Spirits can pass through blockages, but move rather slowly. Wandering bombs will explode if you get near them. These enemy types will wander at random or will home in on your position.

Spryts are free-floating energy beings which will kill, set off bombs and light fuel leaks on contact. They cannot be harmed by explosions — you need to find a plasma protection suit utility cell and then walk into them to destroy them. Fortunately, spryts tend to follow set paths, so are relatively easy to avoid.

Most of the other level features are harmless. Walls and machinery you encounter will not be damaged by the explosions and will not directly harm you. Conveyors will cause bombs to move, or deflect a moving bomb. Drains can be useful if you have a fuel leak — a burning trail will not reach you if you are standing over a drain.

Pipe networks can prove troublesome. Explosions can travel through the pipes and emerge at other openings. It's not difficult to light up half the entire level with a single bomb and a pipe network, so watch where you stand!

Multiplayer

Two to four players can take part in a battle against each other in a choice of eight arenas. No enemies are present on these levels, but all the utility cells will be available to the players who grab them.

The aim of the multiplayer game is to blow up the other players. You can preset the number of lives to start with, along with the number of rounds a player will need to win to become the overall winner.



The controls

Default key settings are provided for two players :

	Player 1	Player 2
Left	Z	keypad 1
Right	X	keypad 2
Up	'	keypad 6
Down	/	keypad 3
Fire 1	Return	keypad +
Fire 2	Space	keypad .
Escape	bring up in-game menu	
F12	pause	

Settings for all players can be redefined from the menus. Joysticks can also be used.

Mouse control can be used by one of the players. A small green arrow will appear next to the player during the game. Move the mouse to change the direction of the arrow, then left mouse button to move in that direction. Right button is fire 1 and middle is fire 2.

As well as the control method, the player names can be defined from the menus. This is useful for working out who's who during the multiplayer games.

The menus are controlled using the cursor keys to move between options and return to select. Some settings, eg. multiplayer level and lives, can be altered with left and right cursor keys.

The options menu, available both in-game and from the main menu, allows you to configure the sound settings, screen mode and other game features. The game will run by default in Mode 13, but owners of newer machines will want to switch this to Mode 49 to avoid the letterbox effect. The startup screen with the AU logo will indicate if the game thinks that Mode 49 is available.

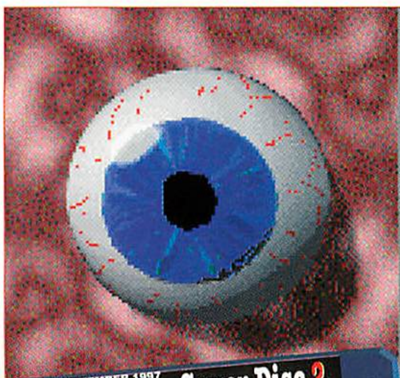
The game can be run straight from an archive, but when quit is selected from the main menu, it will try to save the current high score table, player name settings and other parameters for the next time you play.

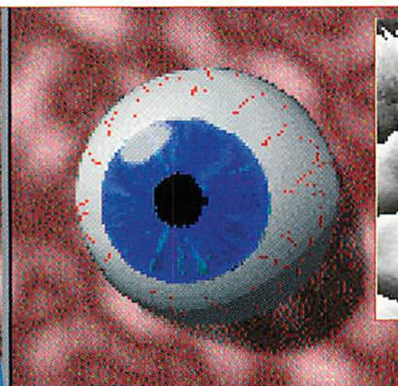
Sherston upgrades

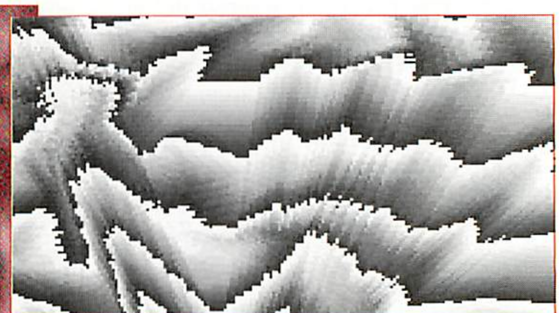
Sherston Software

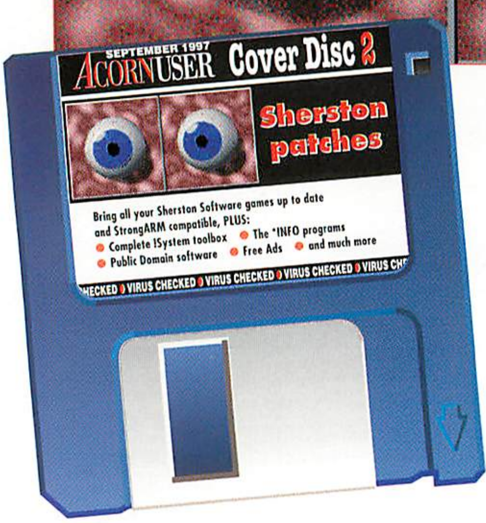
Run this program, then drag any Sherston application that you want upgraded into the window. If there is an upgrade available you will be given the choice of upgrading the application.

!Activity
!Alphabet
!AV3
!AVIV
!BabySittr
!BadDog
!Balloon
!Billy
!Birthday
!Bobby
!ByTheStrm
!CatInTree
!Clarence
!Clown
!CMaze
!Creepy
!Derek
!Dinosaurs
!DolphPool
!Doris
!Edwina
!ElfKing
!ElfMagic
!Europe
!Fancy
!FloppyBth
!GoKart
!GoodOld
!Gordon
!Headache
!Homes
!HotDay
!Idea
!Jumble
!Jungle
!LandTrans
!Lucy
!Monkey
!MyPet
!Naughty
!NewDog
!Nobody
!OnTheSand
!Pets
!PetShop
!Picnic
!Presto
!Push
!Quack
!Rhymes
!Rhymes1
!Rhymes2
!Rhymes3
!Rhymes4
!Rhymes5
!Rhymes6
!RopeSwing
!Rusty
!School
!Sea
!Seaside
!Sinking
!Sneezes
!Snowman
!Space
!Spots
!Stage2
!StrawJam
!Tables
!Tasmin
!Terry
!TheBody
!TheDream
!ThePark
!TheWorld
!Tina
!Tizzy
!Toby
!Toys
!Trainers
!WatrFight
!Weather
!WhatFor
!World









Regular items

- Mike Cook's PIC eprom blower
- Free Ads — all our Free Ads on disc
- All the *INFO programs

Extras

- Yet another solution to the Countdown TV programme
- Demo version of *Draggie*

System and Toolbox modules

Over the past few issues there have been a number of programs which have required the Acorn Toolbox modules, but occasionally they have not all been supplied. Here is the definitive set along with some extra modules you may need.

Risc PC and A7000(+) users should use the System merge feature built into the Config program. Other users can either use the !SysMerge program or just drop this version of !System into the same directory as your current version.

WARNING: Do not delete your current version of !System, the one on the disc is not complete, it only contains the Toolbox modules. If you delete your existing version of !System your software will not work correctly.

Disc information

The software on these discs has been compressed using ArcFS 2 from VTi, and are opened by running a copy of ArcFS then double-clicking on the archive to open it. There is a copy of ArcFS on each disc.

Most software will run straight from the archive, but some programs may need to be copied out of the archive before being run, uncompressing them in the process. Any program that saves a file to disc, for instance, will be unable to do so into the archives on the disc.

Faulty disc?

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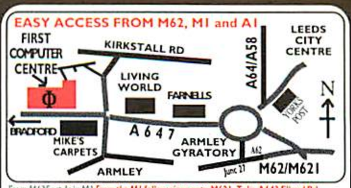
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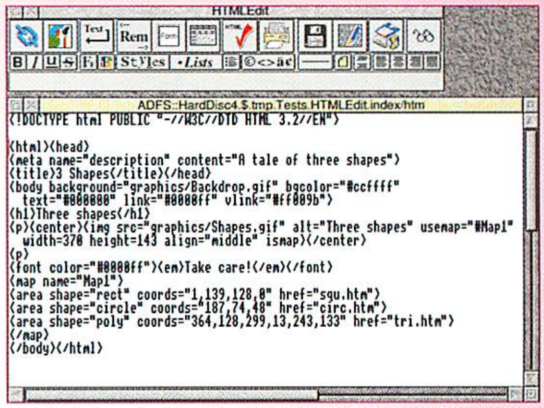
Arachnid software

David Matthewman looks at the latest crop of Web design tools for the Arc

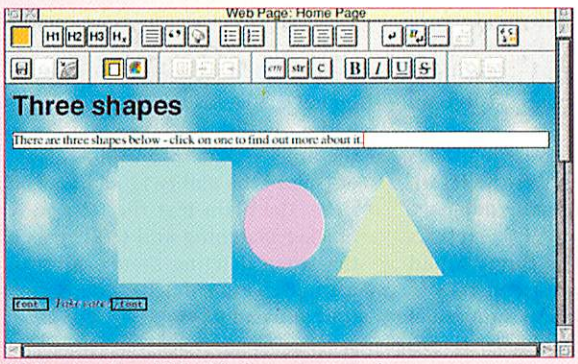
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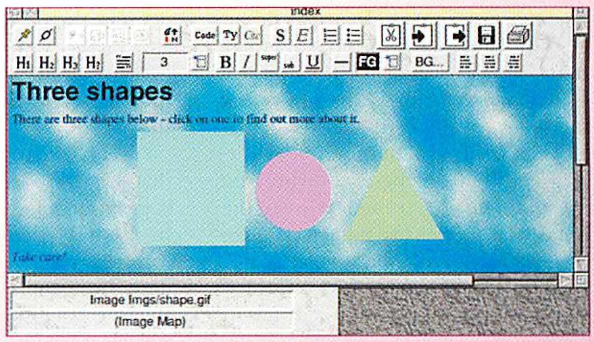
Using free software – the syntax colouring in *Zap* helps readability



HTMLEdit's packed tool bar but rather plain text display



Webmaster from IMS with the unsupported <font> tag in a box



WebSpider's display looks most like a browser such as *Fresco*

One of the myths of Web design is that the hardest part is learning HTML. It isn't. Given that I wrote a long running series in *Acorn User* explaining HTML, this may come as a surprise, but really HTML is a doddle compared with all the other things that go along with it – checking the spelling, keeping track of links, designing the 'look and feel' of the site, even uploading the site to your ISP. As a result, Web design tools have to be more than just HTML editors to be useful.

This is doubly true on the Acorn, where the GIF format (standard on the Web) isn't supported natively and Web conventions like file extensions, case-sensitive filenames, unlimited directory sizes and arbitrary filename lengths also cause problems.

Rather than taking each of the products in turn, I'll go through the stages of designing a site and see how each measures up.

Meet the contenders

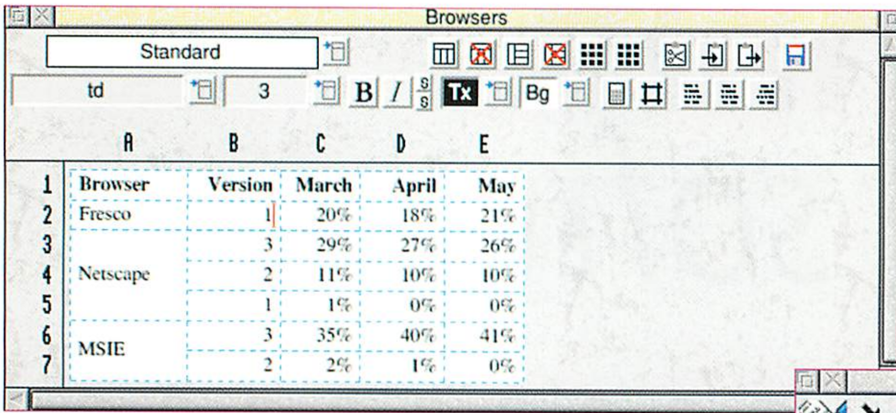
HTMLEdit from R-Comp has been around for a couple of years and is now onto version three. *HTMLEdit* itself is a text-based HTML editor, but it comes with a suite of other programs:

- *WebFS* – an image filing system which allows long file names and more than 77 files in a directory. This is very useful for building up Web sites destined to be hosted on (say) a Unix system.
- *WebMapperLite* – a cut-down but usable image-map editor.
- *CSV2Web* and *OvP2HTML* – two converters for CSV files to HTML tables and *Ovation Pro* files to HTML documents.
- *ArcWeb* and *Webster* – for previewing HTML files. Webster is especially useful as it supports tables.

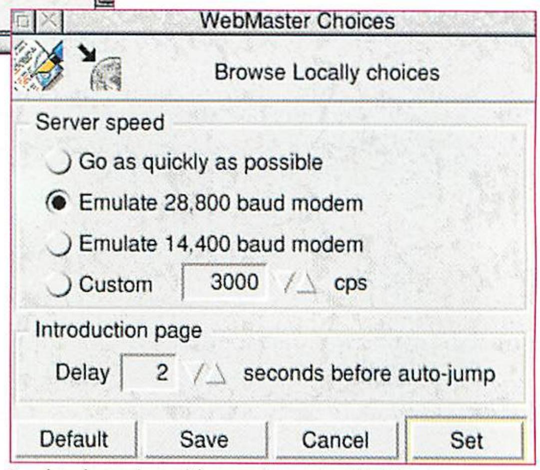
R-Comp have now produced a supplementary suite of software for the Web designer, called the *Web Designer's Toolkit*. This consists of a set of useful conversion utilities, a management system for a database of URLs and macros, the full version of the image map software and two utilities to help with creating table and frame pages.

Dalriada's *WebSpider* is an HTML editor and image conversion utility combined. There is a separate utility for creating HTML tables (based on Dalriada's *TableMate Designer*) and an image map creation program.

Finally, *WebMaster* from IMS is an all-in-one program, which includes an



A cut-down version of *TableMate* is included with *WebSpider*



Emulate browsing with a modem using *WebMaster*

image-map editor within itself. It also includes a utility for uploading your Web pages to an ISP – something the others lack.

Setting up the site

A Web site is a collection of files in a directory structure rather like those on your hard drive. HTMLEdit accesses the files directly, but both WebSpider and WebMaster set up a pseudo-application that contains the site, rather similar to *Impression's* pseudo-application documents. The indirect approach has the advantage that it's easier for the application to manage the files on the site so, for example, if you move files around, the program can keep track of them.

WebMaster does this best, allowing you to set a number of parameters over the site. You can give the site named colours, default body attributes and a master page. The master page only affects newly created pages, so you can change it for different areas of the site.

While HTMLEdit doesn't actually keep track of sites, it does come with a facility to 'publish' files and directories. This copies them to another area of the site, expanding any macros in the HTML. It also has a master page system and a database of images, although these aren't tied to one site.

Editing pages

Editing HTML is different from editing many other documents. HTML is in essence text, and can be edited in a simple text editor with no problem. Other, more sophisticated, editors can be used, right through to ones that look nearly identical to Web browsers. The latter are sometimes referred to WYSIWYG editors, but that's very misleading.

When you're creating documents using a DTP package, you're creating something that's going to be printed on paper. You *know* what it's going to look like, and it helps if the screen display is as close to this as possible. When you're creating an HTML page, it can be displayed on any platform, in any screen mode – or even passed to something like a speaking browser. What You See is only ever going to be a guide to What You *Might* Get.

It's better to think of editors that emulate browser displays as 'visual' editors. The point is not that what you see is what will appear in a browser, it's that the page can actually be easier to edit in this state. The tags are all hidden making proof-reading easier – headings look different and images are visible on the page.

The main danger of a 'visual' editor is that you have less control over the HTML it generates, since you normally don't see it. Visual editors on the PC such as *FrontPage* have given the range a bad name by generating often awful HTML. However, that's not a reason to shun visual editors on principle. Experienced HTML writers will prefer the extra control that text editors give, but if you're only doing simple markup, visual editors can be faster and easier to use.

Both WebMaster and WebSpider use 'visual' editors. WebMaster's display is more obviously divided into sections, but otherwise they are similar. All the basic markup is provided for and is generally easy to apply. You drag over a section of text and apply the markup from the toolbar or using a key short-cut. Both editors more or less support HTML 2 without forms and they had greyed out form buttons, so they're clearly coming soon.

The markup created by WebSpider and WebMaster seems 'clean', without many of the problems usually associated with 'visual' editors. This is good, because it means that the pages should display with few problems on different browsers.

HTMLEdit, by contrast, uses a plain text editor with a packed toolbar. The editor is based on Acorn's *Edit* that comes with RISC OS, which means it's familiar but not especially good compared to, say, *StrongEd*. The lack of syntax colouring is a real pain, as even simple HTML pages can appear full of tags and hard to read.

That aside, HTMLEdit's editor is good, with provision for more tags than either of the other programs on the toolbar – plus, of course, the ability to add new ones easily to the plain text file. The editor does bracket matching and treats tags as entities when deleting them – unfortunately it's not clever enough to delete matching start and end tags.

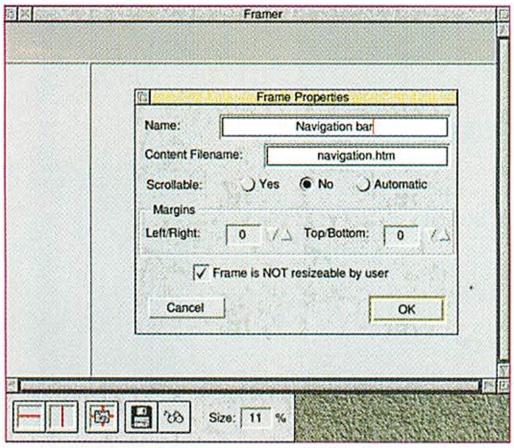
Beyond standard HTML

WebMaster is pretty basic in the HTML it supports, which is more or less HTML 2 without forms and with some of the Netscape extensions such as global colours. You can design a perfectly good site with it, provided you're not looking for anything fancy – it doesn't do tables, for example. WebMaster *will* allow you to add unsupported tags manually – it inserts them in a small box – but it's not an ideal solution.

If your site has any significant table content, the HTML will end up being cluttered with unrecognised tags, losing some of the advantages of using a 'visual' editor in the first place. Furthermore, the syntax of these new tags is not checked at all, and I found it was possible to confuse WebMaster totally by using them.

WebSpider comes with a table creation utility based on TableMate Designer. This is easy to use and you can quickly create good tables with it, but the drawback is

Arachnid software



The *Web Designer's Toolkit* includes a utility to design framed pages

that the tables can only be used as embedded objects within WebSpider. However, I saw a beta release of WebSpider with much better table support where the table was editable within the page – that will hopefully be available by the time you read this.

WebSpider does not currently allow you to enter tags that it doesn't recognise, which is a severe handicap if you're trying to do anything non-standard.

As was noted above, HTMLEdit allows you more or less free rein to add unsupported tags as you see fit. If you also have the Web Designer's Toolkit, you have reasonable table and frame creation utilities as well. HTMLEdit already includes all the tags you need to create a form, so it's well ahead of the opposition in this regard.

Editing an existing site

So much for creating pages from scratch – what about taking an existing site and editing that? My experience is that this is something that both WebSpider and WebMaster are very bad at. (IMS informed us as we were going to press that version 1.04 although not perfect was much improved in this area). WebSpider does a slightly better job on the whole, but of course any unrecognised tags will be thrown out.

HTMLEdit, because it doesn't try to interpret the HTML it's given, is fine for editing existing sites. It's the WebFS filing system helps with sites that have been imported from, say, Unix systems.

If, instead of a Web site, you had an existing collection of text documents that you want to mark up, WebMaster is probably a good bet. It will import text, inserting paragraph breaks where appropriate, and it's easy to add additional markup in the visual editor.

HTMLEdit will do this too, but it's a little more fiddly. It also includes a layout facility WebSpider won't currently import any text longer than a paragraph, although that is being fixed.

Images

Native image formats on RISC OS are Sprite and *Draw* file (bitmap and vector respectively). On the Web there are no native vector formats, and the standard bitmap formats are JPEG and GIF (with PNG coming up on the outside). GIFs come transparent, interlaced and animated. Sprites come transparent (but it's coded differently) and multi-image, which is the rough equivalent of animated. Life would be boring if it were easy, wouldn't it?

All the software reviewed can convert Draw files and Sprites to GIFs. Only the converter supplied with the Web Designer's Toolkit offers much control over the process, and that can also create animated GIFs from a multi-image sprite. WDT's converter was also the only one to anti-alias Draw files, although if there was an option to set the background to anything other than white or transparent I couldn't find it, resulting in ugly fringing on some pages.

WebSpider can only convert 256-colour (and lower) sprites to GIFs - it can't create JPEGs. Having said that, it will import JPEGs happily so you can use them if you have something like *ChangeFSI* to do the conversion for you. WebSpider also retains all files in their original format until you 'publish' the site, making Draw files a lot easier to modify.

All the programs will create image maps. WebMaster's and HTMLEdit's image map tools are primitive compared with WebSpider's. However, WebSpider's image map utility only creates client-side maps – if you need server-side maps you'll have to get the Web Designer's Toolkit (or the freeware *Imagen* application).

Checking the site

The only software with any significant syntax-checking abilities is HTMLEdit, which it does very well. You can check your HTML against a wide range of DTDs, and the DTD declaration is helpfully auto-inserted at the top of the document, as it should be.

To be honest, I have no idea if the syntax checking is perfect, but with the few tests I did it caught the errors that it ought to. Having this feature integrated in HTMLEdit is a great help, and one of the major plus points of the program.

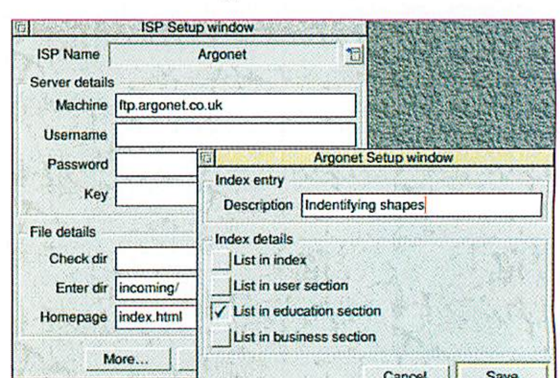
Regrettably, none of the software had a spell or link checker – although just moving files around *shouldn't*) break links in WebSpider and WebMaster.

Publishing

When you've created and checked your Web site, the next step is to publish it. All three programs have a 'publish' option, but it works in different ways on each.

To HTMLEdit, 'Publish' means 'Take this file or set of files and expand all the macros in it.' To WebSpider it means 'Take the files in this pseudo-application and write them out as a *bona fide* Web site.'

'Publish' means much more to WebMaster, which is streets ahead of the others here. WebMaster will allow you to automatically upload your pages to your ISP using FTP. It comes with default con-



WebMaster comes configured for upload to various ISPs

figurations for a number of providers, including Demon, Argonet and Zynet – enter your password and user name and you're away. The ISP details are stored with the site, so you can have several sites on different ISPs maintained by WebMaster and the program will remember what needs uploading where.

WebMaster can also bundle the entire site into a tar file. This is useful for doing a large update of many files, and is the way I normally update the Web sites I maintain.

WebMaster can even turn itself into a Web server, allowing it to serve pages from the site to a browser for previewing. The really useful part of this is that you can simulate various modem speeds to see how quickly your pages will download. It can be a real incentive to cut down on the decorative graphics seeing your pages – which loaded in no time straight off the disc – seep through at 14,400 baud.

The bottom line

As I've pointed out in one of the boxes, the bottom line is that you don't *need* any of the commercial software to design good Web pages. There's some excellent free software out there which does a lot of what the commercial stuff does and covers the vital areas. Having said that, you may still find the commercial packages useful.

HTMLEdit is the outright winner on many of the points discussed. The maturity of this program shows – it is pretty stable and R-Comp have shown that they take note of customer comments. That said, the non-visual nature of the editor might put people off.

R-Comp's Web Designer's Toolkit is a very worthwhile collection of utilities – though perhaps a little overpriced. The frame creator is especially useful should you want to add frames to your site, which is a whole debate in itself, although it doesn't quite cover *all* the options.

WebMaster from IMS scores heavily in the publishing area. Once you've designed your site, it's very easy to publish it on the Web, which cuts out what is usually one of the hardest stages of Web design. Its visual editor is unthreatening for beginners but it's not very good at importing existing sites. I'm also concerned that it's too expensive.

WebSpider is probably the better of the two visual editors and once the table support is integrated it will shape up to be a visual HTML editor to rival anything on the PC and Mac platforms. It hasn't come off that well in this review, largely because of the number of features that are on the 'implemented soon' list.

I should point out that my copies of WebMaster and WebSpider crashed often, which was worrying. I've no doubt that this will be remedied in the near future, as both products are being developed apace, but I'd be failing as a reviewer if I didn't mention it.

About the author

David Matthewman maintains the Xara Ltd and Computer Concepts Web sites and wrote the recent HTML series for *Acorn User*. In a previous life he helped set up the *Acorn User* Web site but that was before he really knew much about HTML, so all his bits of the site are long gone – he hopes. You can contact him by e-mail at david@xara.com

Other solutions

Anyone who followed my HTML series over the past year will know that I reviewed a number of Web design tools over the course of the series – most of which were free. You'd expect them to be overshadowed by the commercial tools, but actually this isn't the case. It is gratifying to see the PD Acorn scene producing such worthwhile offerings, although it must be a little worrying for the companies producing the commercial products.

Both *Zap* and *StrongEd* have HTML modes. These include syntax colouring and are both good – which you prefer depends on which program you prefer. If you've always used Acorn's built-in editor *Edit*, StrongEd's the most similar of the two, although I'm a Zap fan myself. Both support OLE editing for local files with *ArcWeb*.

The HTML modes of StrongEd and Zap are more limited in terms of tags supported than the text editor of *HTMLEdit*, and of course they lack HTMLEdit's toolbar. However, because HTMLEdit's built around Edit's relatively poor user interface, StrongEd and Zap are generally a lot easier to use. It's a tribute to HTMLEdit that I feel its peripheral features now give it the edge, but it's a close run thing.

I don't know of any PD equivalent of the visual editing windows of *WebSpider* and *WebMaster*.

For conversion to GIF, there are a number of tools available. The command-line *GIFTrans* has more or less been superseded by *WebGIF 2* and *InterGIF* – InterGIF will even create animated GIFs, and does a good job of minimising the GIF colours. InterGIF is actually included with WebMaster, and *The Web Designer's Toolkit* includes a similar utility. JPEGs can be created by (among others) the latest *ChangeFSI*.

Justin Fletcher's *Imagen* image map editor is the equal of any of the commercial products – in fact, it's considerably better than that currently supplied with WebMaster.

The *WebLint* and *HTMLCheck* HTML validation software is only matched by HTMLEdit's syntax checker.

In short, you can design Web sites without spending a penny and, in some areas, the PD software is better than the commercial offerings and it's often *more* bug-free, too. Having said that, there are a number of features – automatic upload, visual editing, easier table creation, frame designers and so on – that some of the commercial offerings boast over and above the PD software. Beginners may find these features useful, but HTML hacks like myself will probably remain sceptical.

Product details

Product: HTMLEdit v 3.0
Price: £49 (no VAT)
Supplier: R-Comp
Tel: 01925 755043
Fax: 01925 757377
E-mail: rcomp@rcomp.co.uk
WWW: http://www.rcomp.co.uk/

Product: Web Designer's Toolkit
Price: £30 (no VAT)
Supplier: R-Comp (see above)

Product: WebMaster v1.03a
Price: £99 + VAT
Supplier: Innovative Media Solutions Ltd
Tel: 01934 522880
Fax: 01934 522881
E-mail: sales@ims-bristol.co.uk
WWW: http://www.ims-cdc.demon.co.uk/

Product: WebSpider v 0.90b
Price: £40 (£60 after August)
Supplier: Dalriada Data Technology
Tel/fax: 01926 492459
E-mail: support@dalriad.demon.co.uk
WWW: http://www.dalriad.demon.co.uk/

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Ted Lacey Archive May 1996
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Mr B. Lincoln
"...excellent and marvellous value..."
C. Jarman

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Mr B. Herefordshire
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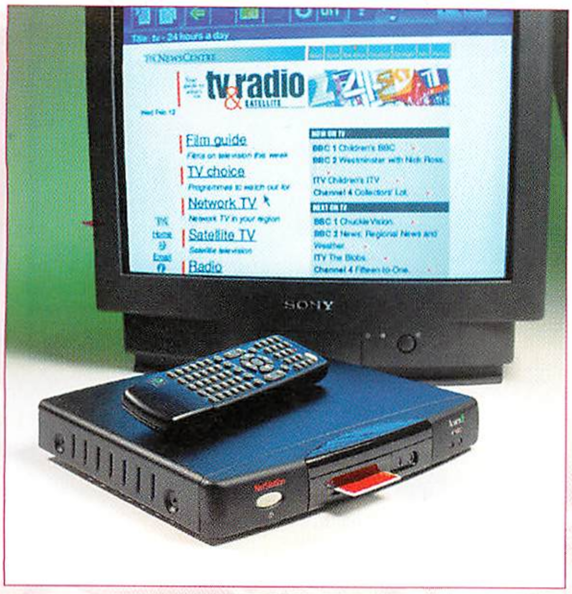
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Get connected

Stuart Tyrell begins our series looking at the Acorn NetStation

It would be difficult to find an *Acorn User* reader who is not aware that Acorn have released a Network Computer (NC) recently. Although the Acorn NC will be available in a number of guises, the first machine to be released is the 'Home NC'. This is a machine designed to allow people access to the Internet who would otherwise consider a desktop PC too complicated or expensive to use.

On the outside..

Despite being promoted as a 'low-cost Internet access device', the general appearance of the NC is one of remarkably high-quality. Its body is manufactured from steel with the front panel in moulded plastic, both finished in black. Acorn have always been acknowledged for their innovative enclosures, and in this case the NC would not look out of place alongside any television or video recorder.

The attention to detail in the design is impressive. For example, there is a small hole punched in a tab at the rear of the cover of the machine, and a matching tab and hole on the body itself. Although the tabs must add very little to the production cost of the NC, they enable it to be secured if it is to be used in an unsupervised environment. Fitting a padlock also prevents the machine from being opened, safeguarding any RAM which may be fitted.

The front of the NC has a single button – the standby switch, and red and green LEDs indicate whether the machine is on or in standby mode. The only other immediately visible feature is the smartcard socket. The smartcard is supplied by the Internet Service Provider (ISP) – the people who provide your connection to the Internet, and serves to identify you. In theory, you can insert your smartcard into any NC which is handy and all your preferences, favourite Internet sites and other settings will be available.

...and in

Hidden from view behind a small flap is a socket for a ROM card. In common with all Acorn machines, the NC's operating system is supplied on ROMs which are supplied within the machine. Small extensions can be downloaded automatically from the Internet at connection time, but if major upgrades to the operating system are released they can be supplied as a ROM card – these just slot in under the flap, making the NC upgradeable without opening the case.

Also hidden away behind some smoked plastic are two further LEDs, which can be switched under software control. It is not immediately obvious what their function could be.

NC alternatives

The NC is currently available in two 'flavours' – one type is fitted with a



Get connected



modem as standard, the other with an ethernet interface. These appear to be standard expansion modules as fitted to the Risc PC. Presumably a modified version of the modem would function in a desktop Acorn machine.

A standard parallel port is available, which will allow hard copies of documents to be produced. Zip drives and other parallel port hardware can also be fitted here – drivers for parallel port Zip drives are supplied in ROM.

In control

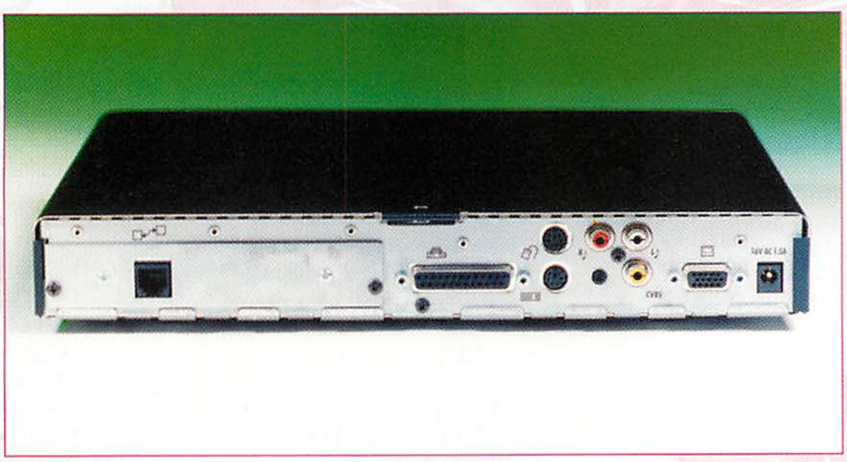
Although the machine is primarily controlled by an infrared device, a standard AT-style keyboard and PS/2 mouse can be attached. These may be invaluable for wordprocessing work, but a full infrared keyboard with integral trackerball should be available in the near future, which will offer a 'traditional' input device without the need to trail wires from the computer.

The standard infrared device supplied with the NC looks like a cross between a television remote control and a gadget from *StarTrek*. In addition to all the letters from A-Z, it has a separate section with numbers and most of the other characters available on a full-sized keyboard which can be accessed by the use of shift and control keys.

The central section of the controller has four direction controls mounted around a central unmarked button, which selects options or follows links from the WWW pages which are being viewed. There are also page up/down and line up/down buttons to scroll around quickly. Common actions, such as moving back to a previous page, or opening a new page are also available using dedicated keys.

Connecting up

A SCART lead is supplied which connects the NC to most modern televisions. There is no aerial output – probably a sound move as quality of this type of connection is often poor, and the new fifth television channel can cause interference. The composite video output will produce a 760x576 pixel interlaced picture with 32 thousand colours, along with stereo 16-bit sound. Alternatively, a standard SVGA monitor can be connected providing a non-interlaced 800x600 pixel output.



Although the picture produced on a television is interlaced (the 'odd' lines forming the picture are shown first, and then the 'even' lines 1/50th of a second later) the picture produced is remarkably stable. Imagine a horizontal line which is one pixel deep, normally this would be displayed in one instant – when the 'odd' lines are displayed – but would be missing the next, when the 'even' lines are shown.

This would normally make the line flicker as it is only displayed every other time a picture is shown. Acorn patented a mechanism which smoothes out this 'twitter' after a screen has been drawn, and the result is a picture without the flickering which is normally associated with interlaced displays.

Under cover

An unpadlocked machine may be opened by removing four screws and taking off the top cover. The NC proper occupies approximately two-thirds of the case, the rest being taken up by the modem or ethernet card.

The machine is based around the ARM7500FE processor, as found in the new A7000+, which is clocked at 40MHz. The processor is the main feature of the motherboard, as it integrates the separate video, memory and I/O controllers found inside machines such as the Risc PC.

Up to 32Mb of RAM may be fitted using a standard SIMM module. Normally, 8Mb is fitted which should be adequate for most users. Any RAM which is otherwise free is used as a cache to store WWW pages in memory.

Conclusion

Overall, the internal implementation of the Network Computer shows the same high quality of design as the rest of the machine. In terms of hardware, Acorn are in the enviable position of having an integrated processor at their disposal, along with years of experience designing around that family of processors.

With expertise such as this, it is little wonder that many large companies are adopting Acorn's reference design as their own.

All *boxed up*

Stephen Scott bins pencil and ruler and takes the easy route to table making with the latest release of TableMate

I remember *TableMate*, when it was bundled with *Impression* in 1992, and for all the wrong reasons. It had more bugs than a bait shop. I used it once and once only. My project work never required the use of tables, and whenever I needed one, I just used the Tab and Return keys in Impression.

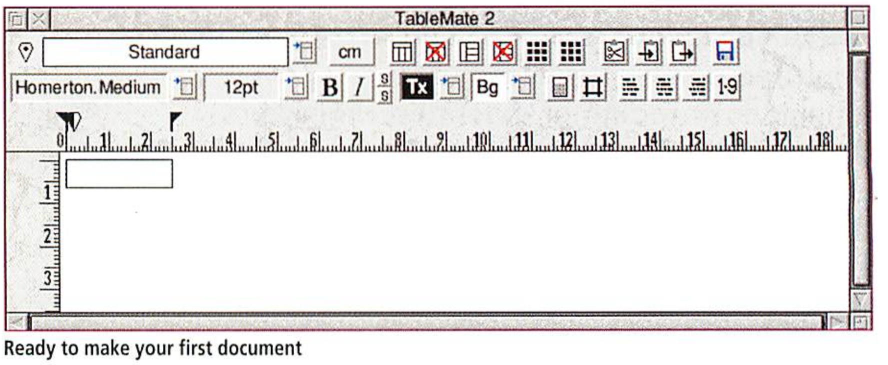
For the uninitiated, TableMate is a software aid to the creation and handling of tables, for use in reports or project coursework, or indeed for any document that requires a graphical way of listing numerical, textual and graphical data. TableMate is the easy alternative to the pencil and ruler, for all you have to do is enter the data.

To say that *TableMate Designer* (to be referred to as Designer henceforth) is a rather more impressive product than the original version is an understatement. It is more powerful and more diverse than its predecessors TableMate 2 and TableMate 3. Hence it is aimed at an audience who create tables more often than most, including Webpage designers — a subject I shall return to later on.

Getting started

The package comes in a sturdy, high quality folder. The software comes on one disc kept in a pocket, while the manual is ring bound, to allow for new version material to be added. Ring binding should be made compulsory on all computer related products, as I am sure anyone who has tried to use the RISC OS 3 User Guide will agree.

Designer is intended to accompany the major Acorn DTP and wordprocessing products such as *Impression Style/Publisher*, *Ovation Pro*, and *TextEase*, but can be used alone. You can import and export common filetypes such as CSV, TAB and HTML, as well as create tables from scratch. Simple spreadsheet facilities are available, and OLE (Object Linking and Embedding) is supported for use alongside the aforementioned major packages.



Ready to make your first document

Two programs are supplied. Designer itself, *TableTool* — a supplementary program which converts text tables into GIF or Sprite format images — and two free desktop fonts from EFF.

Designer runs from the iconbar, and supports interactive help. The main window contains an Impression style toolbar across the top. Within the blank area, a ready-made text cell, complete with cursor awaits your input.

The initial simplicity of the program's design hides a rather powerful array of features, which can be selected from either the toolbar, the main menu, or through keyboard shortcuts.

Building blocks

I followed the manual through its introduction to tables and onto the creation of simple text tables. It is indeed a rather pleasant experience, for the ease and speed with which you can produce a document is inspiring.

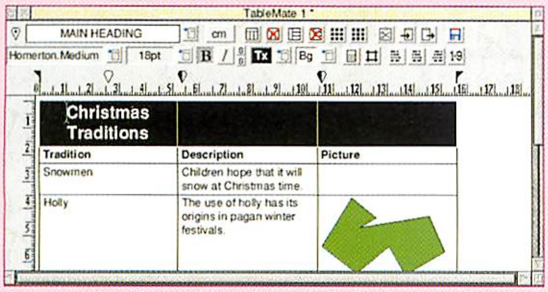
Starting with a single cell, you type your text in, and with a press of the Tab key, another cell is added to the right of the current one. A simple press of the down arrow key will add a new row of cells exactly like the current one. With these two keys alone, you are well on the way to producing a table quickly and efficiently.

Individual cells can be increased or decreased in size by holding and dragging the required column with either Select, which shifts any following columns accordingly, or Adjust, which resizes only the desired cell, leaving the other columns unchanged.

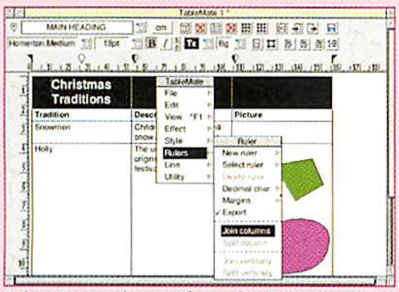
Like Impression, Designer allows you to create different rulers to apply different styles across a table. For instance, one ruler can be used to define the main heading for a table, while another ruler can decide whether the text in each cell of a selected row is centred. Text styles such as italics, bold, subscript and superscript are possible. Ruler measurements can be toggled between imperial and metric conventions. Millimetres, points, elites and pica measurements can also be entered in writable icons, when you wish to change cell dimensions and text sizes to more exact specifications.

The text itself can be highlighted and have styles applied to them. Even colour can be applied to cells and words, and the line style of the table can be altered to your liking. With all these qualities, it is

Creating cross-headings in Designer



Create a new ruler, and highlight the desired columns



Select 'Join columns' from the Rulers menu



The cross column heading is created

easier to describe Designer as a word-processor for tables.

Designer has a clipboard facility to allow the text within cells to be cut and pasted. You can also cut and paste blocks of cells, however, the width of the cell is determined by the destination, so you may need to reformat the text after making use of the clipboard. The clipboard is not only local to Designer but also has a global capability, allowing use in the major packages which support the global clipboard standard.

Cross headings are created by assigning a new ruler to the row which requires it, highlighting the required cells in that row, and selecting either the join icon or the relevant item under the main menu. As well as applying rulers, styles and cross headings, you can also remove them, with the exception of rulers if they are still being used elsewhere in the document.

Pictures, maths and Webs

One of the most powerful features of Designer is its ability to import Draw, JPEG and sprite files. It is a simple matter of selecting the desired cell, and dragging and dropping the appropriate image file on to the main window. The image is then resized automatically to fit the cell, resizing it if necessary. By double-clicking on an image cell, a window appears to allow you to resize the image manually.

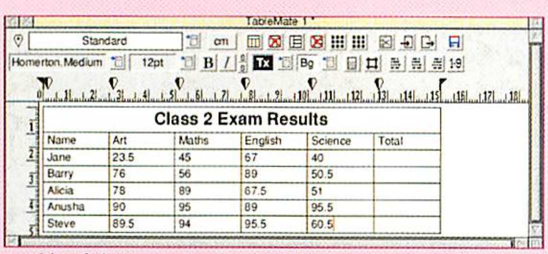
Designer also has a limited in-built spreadsheet capability. The same conventions are applied where the top left cell is represented as A1, the next column B1, the next row down A2 and B2 respectively, and so on.

The Formula window is used for the purpose of mathematical calculations. Instead of entering cell coordinates, the mouse can be clicked on the relevant cells and Designer does the typing for you, entering the coordinates in the Formula window automatically.

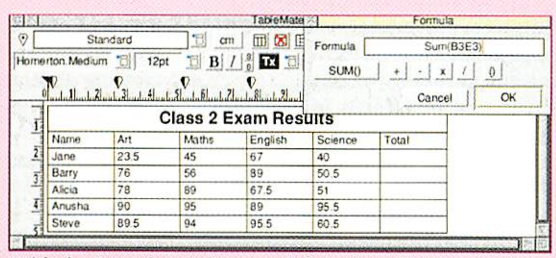
Once you are finished, the formula is applied to whatever cell the cursor was in before the Formula window appeared. Formulae can be cut and pasted to other cells to save time. When handling a lot of numbers within tables, you can make use of decimal point tabs, which supplements the text alignment tabs.

As mentioned, Designer can also import and export HTML 3.2 tables. This feature

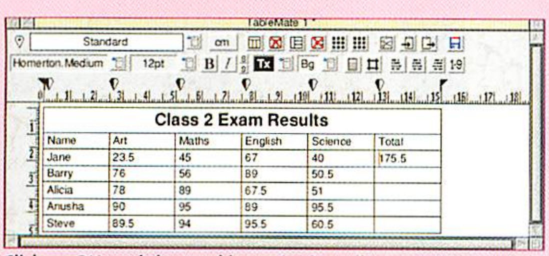
The spreadsheet facility



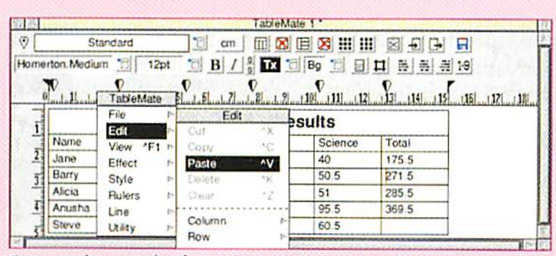
A table of classroom results that need totalling. Place the cursor in the cell that requires the total



With the Formula window up, click on the cells that require adding

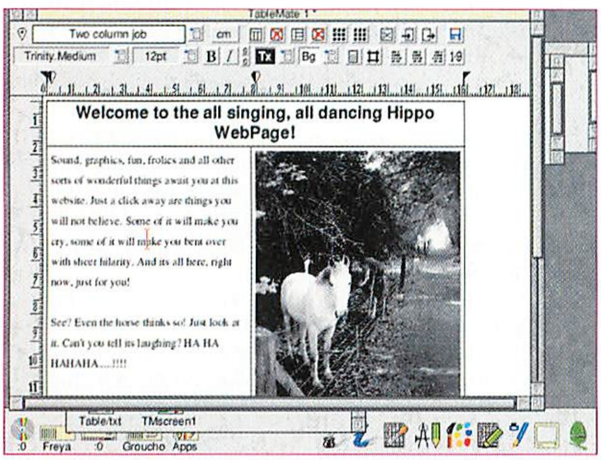


Click on OK, and the total is put in the cell



Copy and paste the formula into the other cells

All boxed up



Creating a table for use on a Webpage — complete with images

addresses the problem that many first time Webpage authors have — that of programming tables into their pages. Simply prepare your table as normal, and then export as HTML.

The end result is a text fragment that can be pasted into your Webpages. Any images within your table can have image and hyperlink tags added by double-clicking on the graphic and clicking the HTML icon to access the writable icons included for this purpose. Since I design Web pages, this ability to export tables ready for use on the Web takes a lot of legwork out of debugging and checking the code.

Documents can be printed from within Designer, but only onto single sheets of paper, and will not generate multi-page reports. There is also no dedicated icon on the toolbar for printing. You have to navigate the menu structure, or press the Print key. This is a rather odd omission, considering that most of the other features are represented on the toolbar.

The manual

I was generally impressed with the manual. It shows in simple steps — using the supplied example files — how to create simple documents, before progressing further onto the advanced editing features. There were a few typographical and factual errors, resulting in some inconsistencies between window screenshots, and the written descriptions of their contents.

For example, when consulting the Named Colours section, the screenshot of the Colour style window shows a Colour icon, while the written passage below the screenshot refers to the Cell icon instead — not serious but irritating.

A rather thoughtful addition to the manual is the inclusion of notes, hints and tips at the end of some of the chapters. Called Designers Notes, these sections are very well written, and worth consulting.

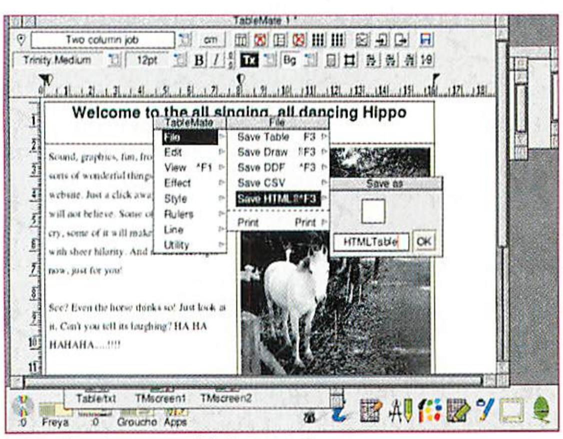
And finally...

After using Designer exhaustively for the best part of a week, I am rather impressed with its interface and its wide scope for creating documents.

However, the software crashed fatally on two occasions, when I used the Adjust button to drag a cell column to reduce its width. My work was then lost after an error box appeared stating *EventDrag*, and on the second occasion *WimpEvent*. However the bugs have not appeared since, despite my attempts to figure out the circumstances behind their occurrence.

Bugs such as these are always difficult to find, and I hope that with future releases they are ironed out. Meanwhile, there should be provision to allow your work to be saved straight to disc in the event of a crash, such as that used in *Photodesk*.

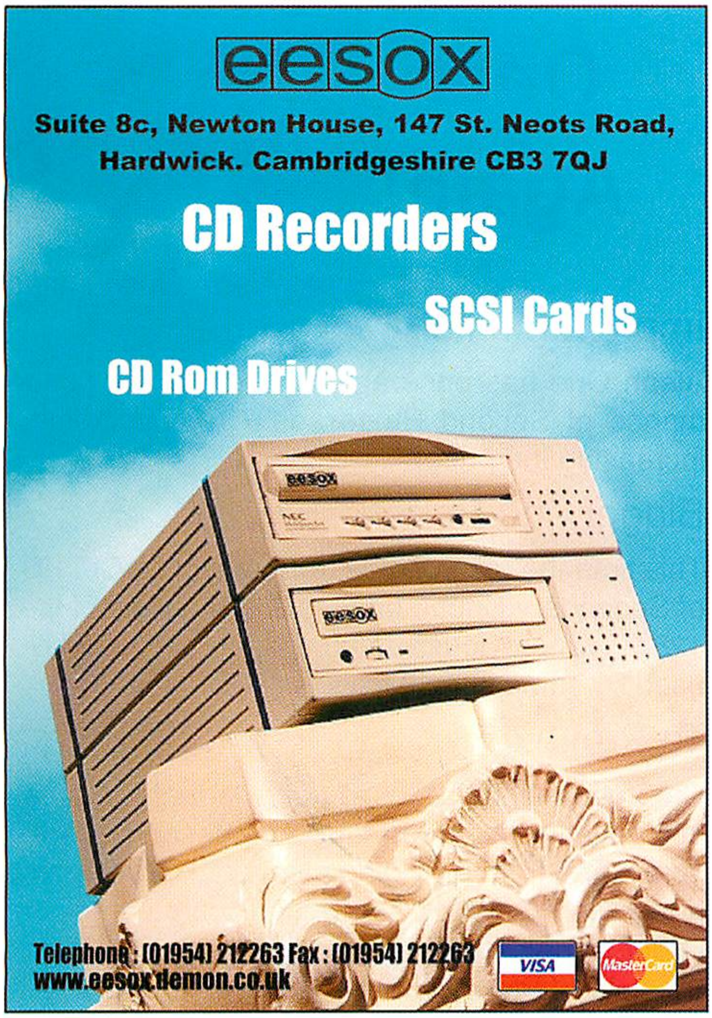
In conclusion, the current version of the software and its accompanying manual are slightly ragged round the edges, and the price seems a bit high. But I would not let it stop me from buying this package, as it deserves the attention. It has indeed come a long way since those hair pulling days some years ago.



Exporting the same table in HTML format

Product details

Product:	TableMate Designer
Price:	£60.00 (cheaper if upgrading from earlier versions of TableMate — phone/e-mail for more details)
Supplier:	Dalriada Data Technology
Address:	74 Greville Road, Warwick, CV34 5PJ
Tel/fax:	01926 492459
E-mail:	sales@dalriad.demon.co.uk
WWW:	http://www.dalriad.demon.co.uk
Pros:	● Intuitive and easy-to-use interface ● Packed with features
Cons:	● Software is slightly unstable ● Errors in manual ● Slightly expensive



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EFF Antiqua
EFF Antique Gothic
EFF Arnold
EFF Ascot
EFF Ascot Black
EFF Asia
EFF Basia
EFF Bauer
EFF Bob
EFF Bodoni
EFF Bodoni Antiqua
EFF Bodoni Poster
EFF Briony
EFF Bristol
EFF Britannia
EFF British Inserat
EFF Caslon
EFF Caslon Open
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EFF Clear Type
EFF Clear Type Sans
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EFF Europe
EFF Europe Black
EFF European
EFF Even letter
EFF Even Writer
EFF Fancy Dress
EFF Fine Script
EFF FORMAL
EFF Fortuna
EFF Franca
EFF Franek
EFF Garamond
EFF Goudy
EFF Goudy Catalogue
EFF Goudy Hand Tooled
EFF Goudy Old Style
EFF Griffo
EFF Gruby
EFF Honest
EFF Horror
EFF Hot Dog
EFF Ice Pick
EFF Ida
EFF Integrated
EFF Interact

Score well with Music Studio 32

Rob Miller tunes in to Logotron's new music package

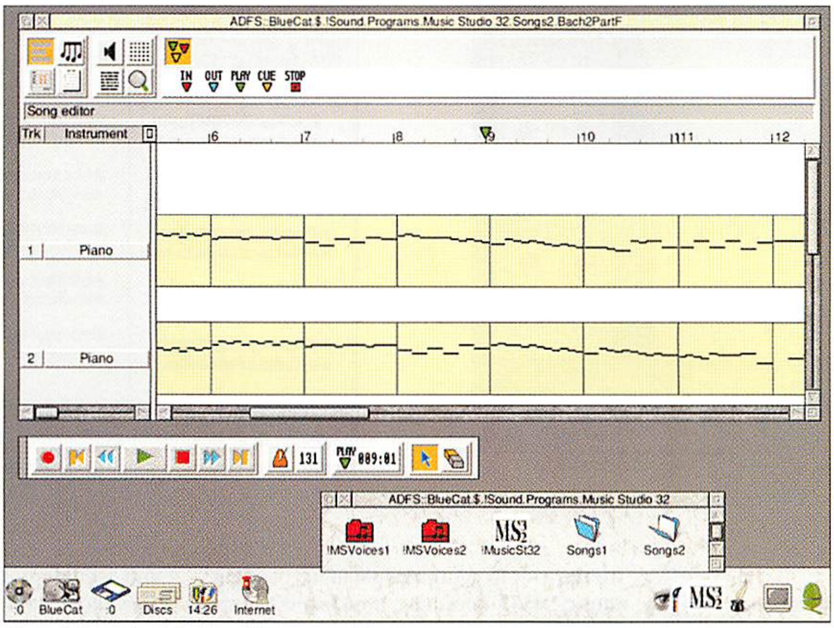


Figure I: An enlarged view of the song editor

Music Studio 32 is Logotron's new successor to its popular *Notate* package. Like Notate, it is designed to allow the creation of music using internal voices, MIDI instruments, or a combination of both. Up to 32 tracks can be utilised, hence the name. Those already familiar with Notate should have no problem getting used to MS32's interface and even those who are new to the program should find it easy thanks to the close adherence of the RISC OS style guide.

It is basically an application aimed at education and thus contains many features pertinent to its use in schools. For example, many of the advanced features can be turned off, making it easy to customise the screen layout for use with younger children. Also a zoom tool allows the editing part of the main display to be enlarged to help with those who are visually impaired.

While it is biased towards education, MS32 still has many features which will be of use to the home computer owner, and it is quite capable of performing as an excellent music creation tool for the average, musically-inclined user.

Setting up

Installing is simple and just requires the application to be copied from floppy to hard disc, and a quick upgrade to the system folder. MS32 can be run on a floppy-only system although it is recommended that you use a hard disc, plus a minimum of 2Mb RAM. This review was carried out on an 18Mb Risc PC fitted with a StrongARM processor and everything seemed to work perfectly

On running the application, a small window pops up to remind you of your licence agreement and to display which version of the program you are running. Strangely enough, there is no requirement for passwords or any other method of program protection and I would guess that Logotron are relying on the honesty of the user not to give copies to others. This does seem a little naive although it is admirable when you consider the hassle that registering a program can take.

Clicking on the icon bar brings up the main MS32 window which contains all the tools necessary for music creation. MS32 uses a set of four different editors with which to create and edit music. The layout of the main window changes to reflect which editor is currently selected. A floating toolbar is always present on screen and contains a set of 'tape recorder' buttons — icons for selecting the metronome and tempo plus the editing tools. The toolbar also displays the current song position.

The editors

As I've already mentioned, there are four editors. Two allow the input of music – the *score editor* and *grid editor*, the *song editor* allows the arrangement of songs and the *layout editor* allows the editing of the final musical score.

The score and grid editors differ in as much as one allows notes to be input on a traditional music score, whereas the other uses the 'piano-roll' approach where individual notes are represented by different length blobs on a grid. The grid method is more common in music (and MIDI) sequencers so it's good to have the choice of a score editor as well.

Score well with Music Studio 32



Figure II: Using the Score editor

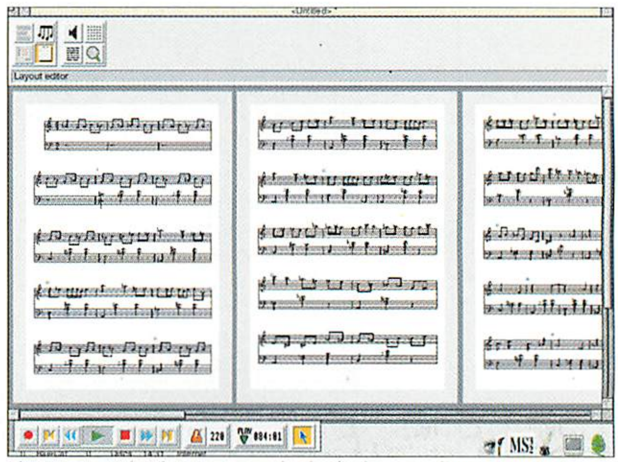


Figure III: Previewing a manuscript in the layout editor

The grid editor

The grid editor offers an alternative method of inputting music or editing an existing tune. It's more commonly known as a piano-roll editor due to its similarity to the rolls of paper used in old-fashioned pianolas. These instruments used rolls of paper which contained holes of varying lengths to represent notes of different duration.

If you imagine that the width of the paper represents the octave limits of the instrument and the length of the paper represents the total length of the song, you should be able to see how such a system works. I'm sure that the inventor of the pianola never realised in a million years that his/her invention would one day be used as the basis for modern music creation.

Anyway, I digress. Using the grid editor is even simpler than the score editor with just a choice of *move note*, *draw note*, or *erase note*. This involves selecting the right tool from the tool bar and then doing whatever action you've chosen on the grid. It couldn't be easier. Being this simple however does have its drawbacks.

Having a grid-based editor means that notes have to be positioned at finite points in the score. This is fine for most uses, and I'm sure a music teacher keen on good timing would applaud it, but it does mean that it's difficult to get that 'human' feel to your music. MS32 does have a quantise feature (more of this later) but it would have benefited from having a reverse quantiser as well.

The song editor

Once you've created a few bars of music, you may wish to make an arrangement. A traditional arrangement might be verse, chorus, verse, chorus etc. but the song editor will allow you to duplicate sections in any order you wish, with the same drag-and-drop tools used in the other editors.

Bars of notes are represented in the song editor as 'mini' versions of the bars with a graphical representation of the notes inside the bar. Figure I shows a zoomed song editor window that clearly demonstrates this. While this is a nice touch, it would be even more useful to be able to label the individual bars with their own unique names, which in turn would simplify the editing procedure.

The layout editor

The layout editor is not really an editor as such but provides a preview of how the score would look if you were to print it out. A special layout setup dialogue window gives control over what is printed — number of tracks and how it's printed (portrait or landscape). Printout is surprisingly good and while not quite up to the standard of *Sibelius*, makes MS32 a very good tool for scoring and printing music.

Special functions

As well as being able to insert and edit notes, MS32 provides a number of advanced features to help compose music. One term often associated with sequencers is quantisation. This in simple terms is a method of shifting individual notes ever so slightly to the left or right in order to correct any timing mistakes.

Imagine if you've recorded some music on a keyboard via MIDI and that your playing isn't quite in time. By using quantising, you can 'tighten up' the arrangement and pull the offending notes to their 'correct' positions. Obviously this isn't going to work for notes that are wildly out but it's surprising how effective it can be on slight inaccuracies.

As it stands, the quantisation tool works well within MS32 but I would have liked a reverse quantising tool as well. It is possible by reversing the processing to add a more 'human-feel' to a rigid piece of music but this is quite a complex procedure. Whether it's the correct thing to have in an application such as MS32 is questionable but I'd like to see it perhaps in version 2.

Apart from quantising, MS32 supports a number of other processing tools, all of

which help with the creative process. Blocks of notes and even whole songs can be adjusted in pitch or transposed, and time-stretching allows a piece of music to be doubled or halved in length. It's also possible to change the volume of a selection of notes, invert them (change their pitches relative to a selected note) or reverse their order. Not all of these tools appear immediately useful although with some experimentation, the results can be surprisingly good.

Summing up

To be honest, when I first ran MS32 I thought that it was just a bit too simple in its approach. Fortunately though, this was just due to the uncomplicated front-end you'd expect on a music sequencer. The writers have obviously thought hard about what exactly a program such as this aimed at the education market should contain — and they have achieved just that.

Apart from missing a few advanced features such as reverse quantising, the only other criticism is the actual design of the front-end graphics. I know that this shouldn't really matter, especially when the program is designed for sound, but a clear and neat front-end often helps the user to appreciate a program more and find it even easier to use. Other than that, it's difficult to fault MS32 for what it is. A compact, easy-to-use, educational music sequencer.

If you own an Archimedes, you'll no doubt be aware of the *Maestro* program that comes as part of the software supplied with the machine. This is an application that allows the creation of music simply by dragging notes from a menu onto a musical score. The score editor in MS32 works in a similar fashion and in many ways, is a souped-up version of the same.

Of course, MS32 contains extra features to assist with the music-making progress, but basically, if you're happy with Maestro, you should be fine with MS32. Logotron make a point in the manual of MS32's similarity to their previous music program Notate, which was also very similar to Maestro. I guess then you could view each program as a kind of natural progression.

In addition to a full selection of notes, there are many other symbols that you can place on the score including bar lines, time signatures and key signatures. There are even special symbols specific to certain instruments such as pedal down (for a piano) and down bow (for strings). Choosing and moving symbols is quite straightforward and a useful status line provides a description of the currently selected symbol menu or symbol.

One special set of symbols allow markers to be placed at various points on the score, to provide control over recording and playback of songs. One set can, for example, be positioned at the beginning and end of part of the score to provide a kind of audio mask. There are also cue markers which can be positioned at important points in the score such as at the beginning of a chorus. This system makes moving around a large score easy but it would be even more useful if the cue markers could be labelled and then selected in future by name.

Editing your work or pre-loaded pieces is simple, and individual notes or groups of notes can be dragged around the score until you're happy with the result. The ever-present tool-bar means that you can preview your work (ie. play it back) whenever a change has been made, making for an exceptionally intuitive interface. Notes and other symbols can even be edited while a song is playing.

Product details

Product:	Music Studio 32
Price:	£83 (+VAT) Upgrades from Notate costs £59. Special offer of 20% discount for anyone upgrading from other music packages
Supplier:	Logotron
Address:	124 Cambridge Science Park, Milton Road, Cambridge, CB4 4ZS
Tel:	01223 425558
Fax:	01223 425349
E-mail:	info@logo.com
WWW:	http://www.logo.com

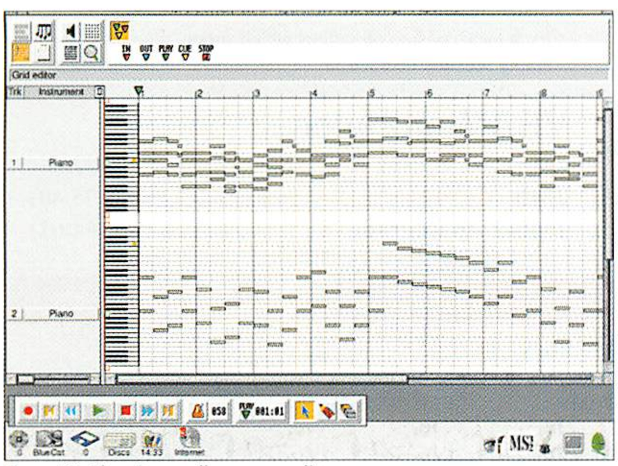
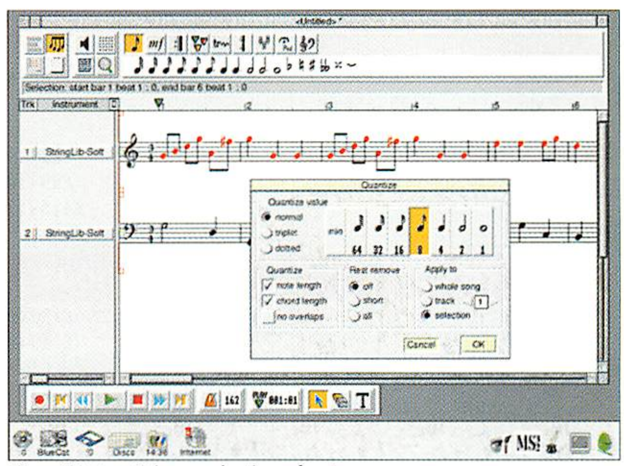


Figure IV: The piano roll or score editor



FigureV: Quantising a selection of notes

Score well with Music Studio 32

A3000 upgrades

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(See also the "2nd user" section)	
2-4Mb upgrade pack	£45 (52.87)
4-8Mb	£135 (158.62)

The above upgrades are all constructed on four-layer boards, as recommended by Acorn. Gold plated connectors are used for reliable contact with the A3000 main board. There are no clips or wires, and no soldering is required (except 8Mb). Full instructions supplied. Some older types of 2Mb board cannot be upgraded to 4Mb, but we offer a trade-in allowance. Please phone for details.

Hard drives

A range of internal hard disc upgrades is available. The upgrades simply plug into the internal expansion slot. Also suitable for the A3010.

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340Mb	£149 (175.07)
420Mb	£169 (198.57)

RISC OS 3	£39 (45.82)
ARM3 (25MHz)	£119 (139.82)

(Dealer fitting recommended for the ARM3)

A3010 upgrades

Memory

1-4Mb	£75 (88.12)
1-2Mb	£35 (41.12)
2-4Mb	£59 (69.32)

The 4Mb upgrade is constructed on a compact four-layer board. No soldering is required. Full instructions supplied.

Hard drives

A range of internal hard disc upgrades is available. The upgrades simply plug into the internal expansion slot. For prices, refer to the A3000 section.

A3000 4Mb RAM £68 (79.90)

RISC PC 16Mb SIMM £49 (57.57)

RISC PC

SIMMs...(please phone for latest prices)

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8Mb	£29 (34.07)
16Mb	£49 (57.57)
32Mb	**£89 (104.57)**

16Mb SIMM to 32Mb upgrade
£63 (74.02)

(By upgrading your 16Mb SIMM to 32Mb you don't lose a SIMM socket. ¢iginal 16Mb SIMM must be returned to IFEL and the type must be suitable - most are. Please phone to check first or ask for our free leaflet.)

RAM packs for upgradable SIMMs

4Mb-8Mb	£24 (28.20)
16Mb-32Mb	£65 (76.37)

Each pack consists of 8 chips which simply plug into empty sockets. Instructions supplied, no soldering needed.

VRAM modules...

1Mb	£49 (57.57)
2Mb	**£88 (103.40)**
1Mb-2Mb upgrade	**£55 (64.62)**

A5000

Memory

2-4Mb	£63 (74.02)
4-8Mb	£135 (158.62)

Dealer fitting for the 8Mb upgrade is recommended for the 25MHz A5000.

A3020/A4000

Memory

2-4Mb	£57 (66.97)

Hard drives

210Mb	£79 (92.82)
340Mb	£89 (104.57)
420Mb	£115 (135.12)

A400/1

Memory

Per Mb (up to 4Mb)	£30 (35.25)
4-8Mb	£135 (156.62)
RISC OS 3	£39 (45.82)
ARM3 (25MHz)	£119 (139.82)

Hard drives. For prices, refer to the A310 section.

Various

Alsystems SCSI 2	£170 (199.75)
ARM3	£119 (139.82)
RISC OS 3	£39 (45.82)
MEMC1a	£35 (41.12)
MEMC1a (2nd User)	£20 (23.50)
Hard disc cradle	£6 (7.05)
Fan filters (pack of 5)	£3 (3.52)
RISC OS manuals, no vat	£22
Dongle dangle	£6 (7.05)
Chip extractor tool (for eg MEMC, ARM2)	£4 (4.70)
CDFS upgrade for Oak SCSI card	£25 (29.37)

The following item is reduced to clear. Please phone to check availability.

Wordworks	£23 (27.02)

A310

Memory

4Mb	£79 (92.82)
4-8Mb	£135 (158.62)

Backplane (4-slot, four-layer)	£49 (57.57)
Fan for above	£8 (9.40)
RISC OS 3	£39 (45.82)
RISC OS carrier board	£12 (14.10)
ARM3 25MHz	£129 (151.57)
MEMC1a	£35 (41.12)

Hard drives

850Mb IDE	£125 (146.87)
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IDE controller	£65 (76.37)
1Gb SCSI	£199 (233.82)

2nd User

Please phone to check availability.

A3000 1-2Mb	£15 (17.62)
A3000 RAM board (ie bare board, no chips)	£5 (5.87)
A5000 2-4Mb	£38 (44.65)

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We carry stocks of most replacement chips for the Acorn range. (MEMC, VIDC, IOC and most memory devices). We can also fit any upgrades and offer a computer repair service.

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Educational and quantity discount available. Dealer enquiries welcome.

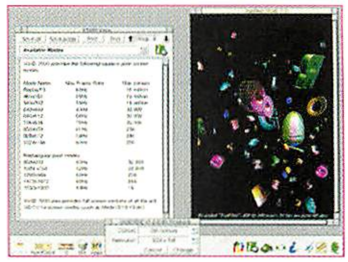
All products (except some marked "2nd User") are fully guaranteed for 12 months. All items normally carried in stock have a 14-day money-back guarantee. Please note that the cost of memory products varies - please phone for the latest pricing.

IFEL

21, Glenfield Road, Glenholt, Plymouth PL6 7LL. Tel (01752) 777106. *Fax (01752) 777830*

VISA

Bigger and better



Jack Kreindler looks at the latest graphics enhancer from iSV Products

The ViVID 7000 is the latest addition to the ViVID range of graphic enhancers for Acorn computers. ViVID20 was the original product in a range that caters for everyone from pre-VIDC users through to those with Colour Card Gold graphics enhancers. ViVID 7000 has been designed with the help of ART for use with the A7000 and Risc PCs which do not have VRAM.

The A7000+, as reviewed in the July issue, uses its fast EDO memory as VRAM and so has less need for ViVID 7000. How the software actually works is not made clear either in the interactive manual provided on disc nor in the iSV product guide. What it manages to do is quite clear however. Once the package is installed — an easy task — and your machine is reset, you find that the Display manager icon has changed.

Click on the new icon and a list of wonderful screen modes appear that offer greater true and logical resolutions in greater colour depths than were available before. An A7000 is usually limited to a very restricted 480x352 screen mode in 32,000 colours, with ViVID 7000 this rises to 736x536 — approximately twice the number of pixels.

Alternatively, you can display the old resolutions in greater colour depth representing an increase in screen memory from around 300K to over 600K. ViVID 7000 must work by altering the operating system constraints on video memory usage and optimising the new screen modes to make best use of the available memory and hardware.

I have been very spoilt since the time of my 2Mb VRAM upgrade and so arriving at a desktop that still did not give me the same performance as 1Mb VRAM was disappointing. It was only when I reconfigured my now VRAM-less Risc PC not to boot with ViVID 7000 did I realise what an improvement the software made. But I don't know how many Risc PC users actually operate their machines without any VRAM at all, and certainly the current StrongARM machines are only truly complimented by a 2Mb card. For old A7000 users, having this utility on board will certainly improve general desktop usability and graphics/Replay handling.

It is not an expensive program and supports up to SVGA, 1024x768 square pixel mode in 256 colours — enough to drive any 14in monitor to its limits — as well as providing old games modes like 12, 15 and 13 in 'unsquashed' format.

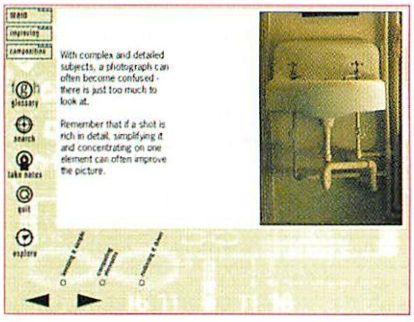
● *Please note that ViVID 7000 does not yet run on the AKF60 monitor.*

Product details

Product:	ViVID 7000
Price:	£11.50 inc. P&P
Supplier:	iSV Products
Address:	86 Turnberry, Home Farm, Bracknell, Berks, RG12 8ZH
Tel/fax:	01344 55769
E-mail:	atimbrell@aol.com

Keeping in the picture

In his quest to become the next Lord Lichfield **Stephen Scott** samples the latest multimedia title from Anglia



This latest CD-ROM title, *Photography*, from Anglia Multimedia is aimed at Key Stage Four students and above taking GCSE Photography, although novice photographers of any age can also make use of the product. Written and presented by photography expert John Hedgecoe, the software gives you a guided tour of how to improve your skills, and use them to your best advantage.

Packaged in the standard CD box, an inlay booklet containing instructions on how to navigate the

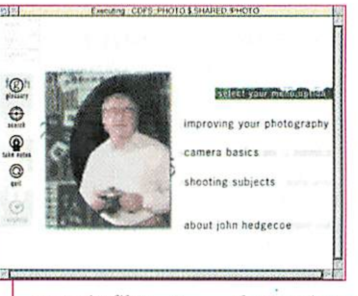


CD-ROM is supplied. When first installed, the program asks if you wish to create a configuration or extras folder onto hard or floppy disc. This can be done at any point throughout the time you are running the disc, but it has an important function which will be explained later.

The program launches into a title sequence, followed by the main menu, from where Hedgecoe introduces himself and talks about the purpose of the program. On first startup, the program drops into singletasking mode, but the F1 and F2 function keys allow you to toggle between single and multitasking displays with ease.

As photography represents such a large body of information, Anglia have divided the disc into three main sections, supplemented by a panel of icons displayed down the left hand side; an online glossary of terms, a search facility, an onscreen notebook, and an exploration area for closer scrutiny of the example photographs.

The main sections of improving photography, camera basics and shooting subjects are further divided into smaller chunks of material, consisting of explanatory passages and example images. Hedgecoe is never far away, talking you through each section, via interuptable Replay movies. In multitasking mode, these elements can be saved as text or spritefiles – a useful facility for students producing written coursework or project work.





In the classroom, the program has a facility enabling you to save a status file at any point within the CD-ROM, so you can return there on your next session. This way, every student can have their own bookmark instead of wading through many screens to find where they were.

Compatible with both PC and Macintosh versions of Photography, these bookmarks are saved within the aforementioned extras folder. Each folder can be given a specific name, so that individual classes can have their own folder.

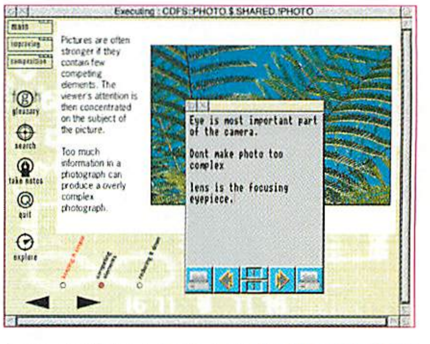
This product should be viewed as strictly an information resource, with Hedgecoe giving many tips and techniques on how to achieve the best shots. Shutter and film speeds, lighting, still life, portrait work, and many more areas are covered in good detail. To supplement this information, Drawfiles of activity sheets are also provided, and these can be printed out and used in Key Stage Four coursework.

The CD-ROM is nicely presented, with a clear structure to enable the subject matter to be navigated with ease. The slick presentation, however hides a general feel that there is not much to do other than merely browse its contents.

The movies of Hedgecoe are rather poor in quality, even in 32 thousand colour mode. In the introductory sequence for example, lines of text fly around him while he talks to you, but because of the degraded quality, you cannot read them very well.

Some of the onscreen text, in particular the slanting type used to select specific pages within a section, is too small to read properly. The choice of example images – most of them are of female fashion shots – is rather unacademic, considering that the disc is aimed at 14 year olds. Surely there are better ways of showing colour contrast than using swimsuited women standing seductively against buildings?

Perhaps I am being pedantic, but the



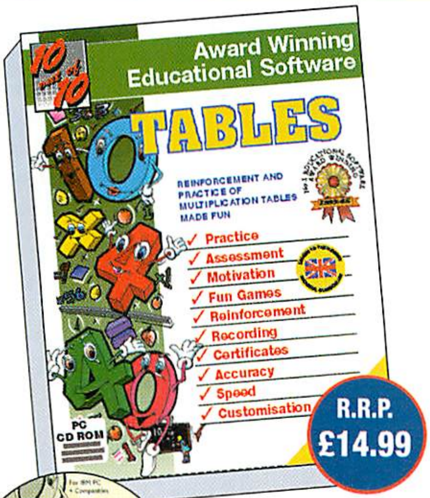
icon used to return you to the previous screen does not change to reflect it being clicked by the mouse, except on one screen containing information about Hedgecoe and his publications. As all the other icons work differently, it is a rather glaring omission, which could easily be rectified.

On the whole, the CD-ROM is informative, well structured and presented, but let down by its movie quality, choice of certain imagery and text size.

Product details

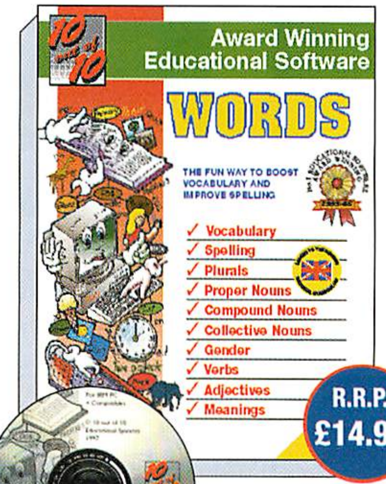
Product:	Anglia Photography CD-ROM
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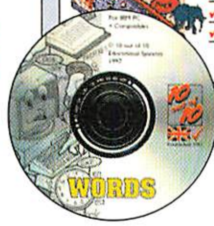
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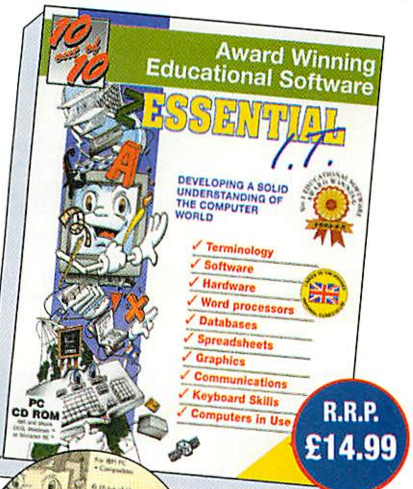


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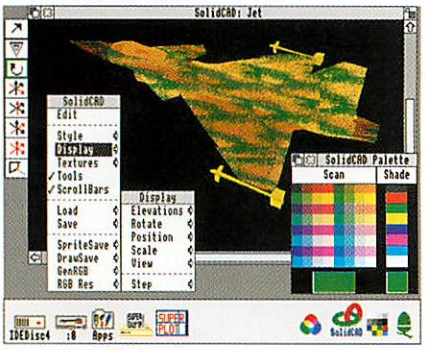
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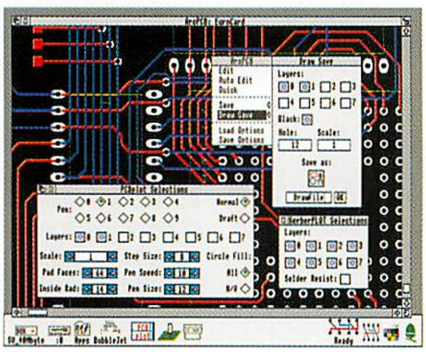
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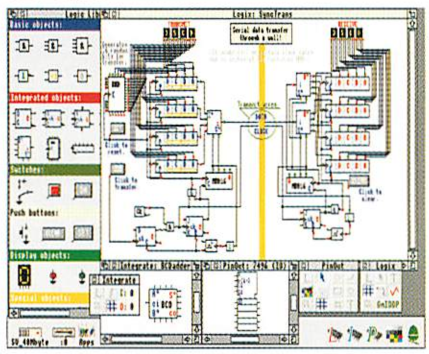
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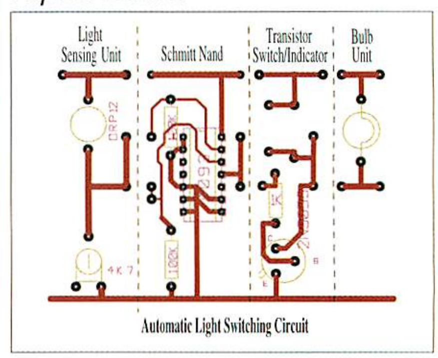
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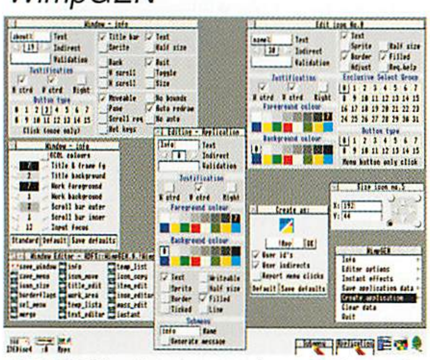
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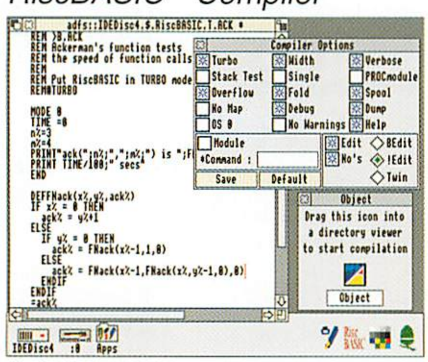
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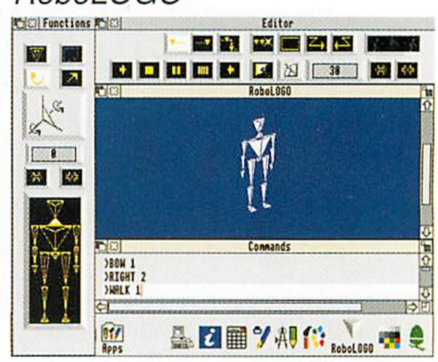
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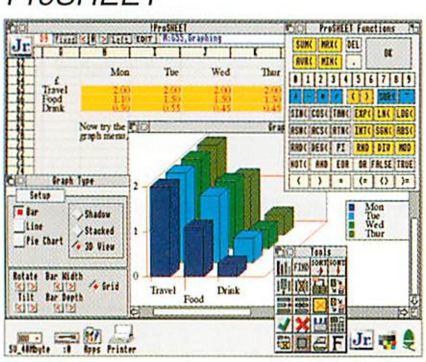
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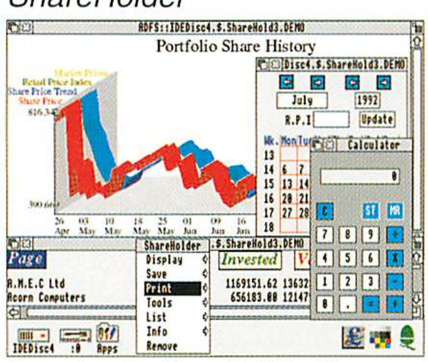
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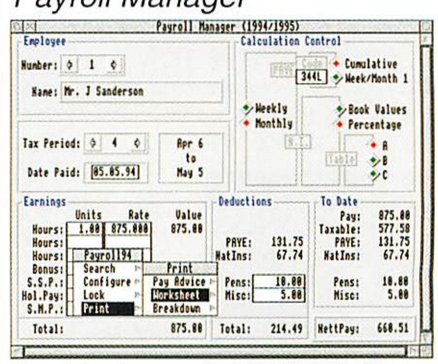
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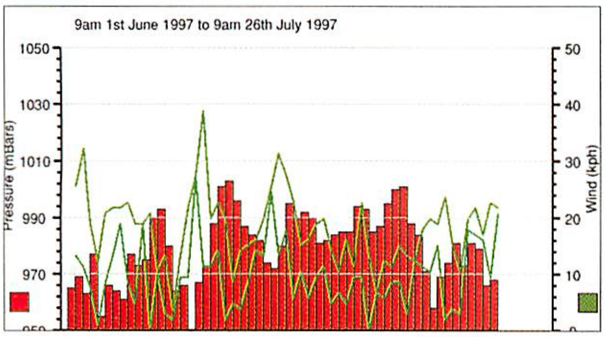
To celebrate 10 years of trading, the prices quoted are substantially discounted up to 50% off RRP. Offer valid for this issue.

Weather update

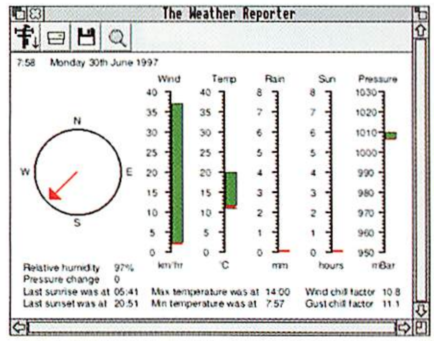
I'm writing this at the end of one of the longest spells of miserable weather that I thought would never end. Midway through the monsoon I received a package from The Advisory Unit: Computers in Education. Somewhat appropriately it turned out to be a software update for their weather station.

The Advisory Unit's *Weather Reporter* is a roof-mounted mast with sensors for wind speed and direction, temperature, light and rainfall, with an option of humidity measurement. The original software was adequate, but a little clumsy, for example, graphs could only be saved as screenshots. The new software has been long overdue, but was certainly worth the wait.

The new program is fully RISC OS compliant and features data output in both native format and as CSV files enabling data to be loaded into a wide variety of spreadsheets, graphing programs and databases. All on-screen displays can be saved as drawfiles enabling them to be used in dtp reports without using up unnecessary amounts of memory.



The graphs can be the weather for the day, or month. Any or all of the individual readings can be included in either bar or line. Also included on the graph are maximum and minimum temperatures, wind chill and sunrise/sunset times.



If you haven't got this system, it really is a worthwhile investment and an excellent way of addressing most of the National Curriculum Orders for measurement.

Advisory Unit
Tel: 01707 266714

Tesco and Anglia

For the sixth year running, schools around the country will be waiting to receive their Tesco vouchers collected by pupils, parents and friends. These have been lovingly counted and 'spent' on IT goodies from Xemplar and a host of companies who produce software and hardware for Acorn and Apple computers.

Software houses, having put the final touches to their products are currently shipping to UK schools in time for the start of the new year. Typical of these is Anglia Multimedia who have 17 products in the Tesco/Xemplar catalogue. Most of these products are Anglia's award winning CD-ROMs which were on offer for between 300 and 400 vouchers.

I would be pleased to hear from any school who has purchased software from the scheme and is prepared to write a small piece about how it has improved their students' learning experience.

Forum for RISC OS users

Many teachers will have recently received information about a new initiative from Xemplar called RISC OS Forum.

The objectives of the Forum are to support teachers' work with RISC OS, help schools get the most out of RISC OS, articulate and promote the advantages of using RISC OS computer systems, keep schools abreast of developments in RISC OS in education and beyond and to provide a forum for members to share information, express views and identify new directions.

Membership of the forum is free and is open to any IT professionals who are actively involved with RISC OS computers in their school, but is limited to one member per school. A quarterly *Forum Newsletter* will keep members updated with news and information concerning the RISC OS community. During the coming months, members will be advised of exclusive benefits including access to a private area on the Xemplar Website, a regular supply of resources and a Forum reception area at Acorn World 97.

Xemplar
Tel: 01223 724724
Fax: 01223 724324
WWW: http://www.xemplar.co.uk/

Argonet offer

Argonet are moving forward in leaps and bounds since Ian Goodall's appointment as Marketing Director. Their latest offer is a 33.6K external modem with three months online for an amazing £99. After the initial three months, connection is as little as £10 per month (+ VAT). That includes local UK telephone call coverage, up to five e-mail addresses and 5Mbytes of Web space.

Argonet Tel: 01243 815 815
E-mail: info@argonet.co.uk

D&T exhibition

The 20th Design and Technology Show is on at the National Exhibition Centre in Birmingham from November 13-15. This is an ideal opportunity to see computers being used to control all manner of external devices from lathes to sewing machines.

For further information contact ICHF on 01425 272711

Contacting me

You can contact the Education page by writing to me, Geoff Preston at Acorn User, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP or by e-mail to: aueduc@idg.co.uk

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VOUCHER 1 OF 3

AU

Unravelling the threads

Steve and Anne Bruntlett
look at XStitch2 from iSV Products

A few years ago when visiting a shop selling embroidery kits, threads and other supplies, I was impressed by their offer to convert a picture of your house, cat, dog, children or whatever, into an embroidery design, complete with symbols representing the thread colour. For £50 you just had to send in your picture and returned by post would be the design and a list of the number and colours of skeins of thread required to complete a cross-stitch version of the original picture.

I thought that such a procedure had many interesting possibilities for art-based embroidery, rather than embroiderers having to follow ready-made patterns or get serious and work out their own chart. Then along came *XStitch2* which promised to do all the above and more, for less than the cost of a single design.

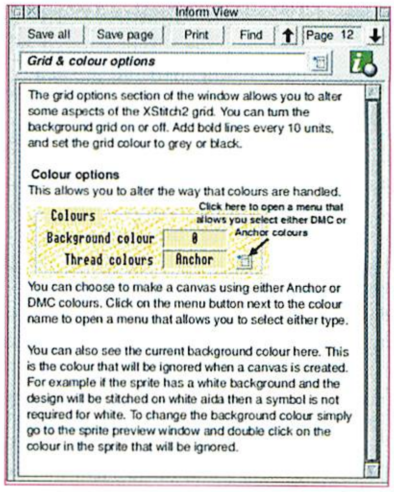
Getting started

XStitch2 is described by its producers, iSV Products, as 'the complete design generator and editor'. As such, it supports both the Anchor and DMC range of stranded cotton embroidery threads which aids the production and conversion of designs suitable for cross-stitch embroidery. Either manufacturer's threads can be specified and saved as the default set of colours.

The single disc comes with an illustrated on-screen manual, typical of those provided with other iSV products and using a similar help system, which can also be printed out if the user prefers working with a hard copy manual.

Installation is straightforward, but you are advised to consult the manual before using the software as specific symbol fonts used by the program need to be initialised. The program comes with sample sprites and designs to get started, but these are quickly forgotten once the program becomes familiar. Then it's a matter of 'I wonder what this sprite will look like' and you're completely hooked.

After initialising the special iSVXStitch font, and running the manual and XStitch programs which are then displayed on the iconbar, designing can start. Clicking on the InformV2 manual icon displays the first page of the manual. This provides options for saving the whole of the text or individual pages but none of the diagrams. This is presumably intended for use in the users own worksheets if using XStitch in school situations, for example.



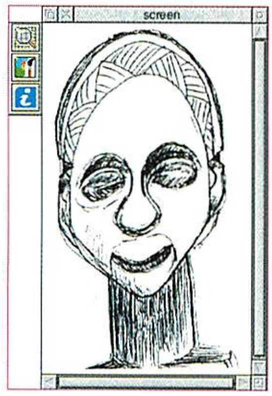
The whole manual or individual pages can also be printed. This prints out a centred manual page. There is also a find option which allows the user to find references to individual words, names or embroidery terms. However, once a specific word is found on a particular page, there doesn't seem to be a way of returning directly from where you were in the manual. This is no real hardship as there is a menu option which lists descriptive titles for 31 individual manual pages.

Designing the pattern

To start designing or using existing artwork click the XStitch icon on the icon bar. This produces a dialogue box titled 'make a new Xstitch design' which has options showing the size and name of any sprite dropped into the dialogue box for conversion to a XStitch pattern. The first time this is is done, using almost any sprite, is amazing.

The program converts the sprite to a 256 colour square pixel format and then reduces the design to the 64 colours supported by the program. This produces a sprite in a window with options for enlargement, re-saving the sprite as a new sprite and showing information on height, width, size and number of sprite colours.

The program happily converts foreign bitmap files such as JPEG, TIFF, BMP and GIFF files before it reduces them to 64 colours. It does this by making use of *!ChangeFSI* but this utility must be seen by XStitch2 before running it. So, for example, dropping in a scanned drawing of a section of an African chief's staff produces what still looks like a clear drawing. This has great potential for drawn or painted images as well as for scanned work produced by adults of children or even simplified photographs.



Measuring up the canvas

Now the fun begins. Clicking on the 'Make canvas' option in the dialogue box produces the actual design called XDesign which, according to the dialogue box, at 14 canvas hpi (holes per inch), is 18 inches wide and 30.3 inches high. This is from a sprite 252 pixels wide and 425 pixels high!

If you want a smaller cross-stitch chart simply change the canvas size and height, (moving up or down halves or doubles the size but specific measurements can also be specified). The program will simplify the sprite to fit the new canvas size at the specified hpi, 14, 18 or 27 canvas hpi are commonly used and can be bought easily.

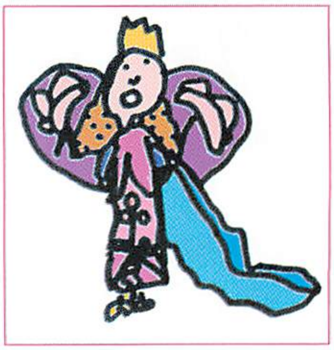
Displaying the design

Before looking at the options on the XDesign panel, which includes calculating the number of stitches of my sprite to be 22,774 and the approximate working time to complete the embroidery of 80 hours 58 minutes, there is another option to explore on the 'Make a new Xstitch design' dialogue box.

This is a supplementary dialogue box covering the options for the XDesign display. These include the option to display the design on a grey or black grid with normal or bold lines and to either produce the design with symbols or colours. Running Acorn's interactive help provides useful information on XStitch2 options.



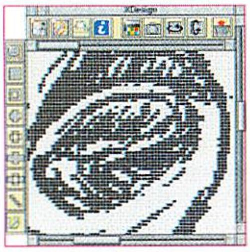
Unravelling the threads



In practice both would be required as you'd need the colour version to work from and the symbol version to follow the thread colours. If the design can be stitched at 40 canvas hpi the size of the design comes down to 6.3 by 10.6 inches, meaning it can be printed on a single sheet of A4 although when the Print XStitch option is accessed, it takes two pages to print even at 100 per cent — presumably because of the way the print borders are set up on my computer.

There are options to overlap the sheets of the design and to pause between sheets when printing out. This worked well in practice producing two printed sheets which could be physically cut and pasted or taped together. However, the symbols are far too small to read and the design would need printing out at 400 per cent before the symbols could be seen clearly.

Printing at 200 per cent is reasonable but you'd need good eyesight. Producing a design with colours shows what your design should look like when completed but you'd need a colour printer unless you're happy relying on the original image. At least the actual sprite being worked from can be saved so it can be referred to on screen at any time.



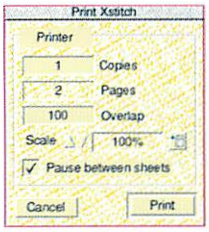
Designs can also be saved as drawfiles. Unused colours can be removed from the XStitch Colour list. Elements of the design can be grabbed using the camera icon and can be flipped horizontally and vertically.



Working direct on design

This brings in the other aspect of the program — that of working direct on a canvas design. There are a range of options to make this straightforward.

To draw a design simply determine the size of your blank canvas and the number of hpi and make a blank canvas. Select one of the thread numbers, not the colour patch itself, from the XStitch Colours menu, click on the XStitch icon and start drawing — not too fast otherwise gaps will be left, though these can be filled in at a later stage.



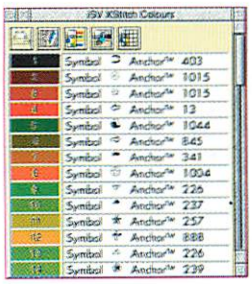
Other options include drawing solid or single stitch outline rectangular blocks, circles and ellipses of stitches. Straight lines of single stitches can be drawn but there is no polygon option. Even so, this provides a quick way of producing complex designs. The zoom option can be used when working in fine detail and the last detail undo helps when experimenting.

Use your own drawings

This program is great if you have any drawing talent, but don't let that put you off. I tried dropping my nieces drawings into the program and they work really well. She drew a picture for me which I then scanned into the computer, saving it as a sprite file. The image was then dropped into XStitch2. The resulting image was delightfully naive in style — just right for embroidering and sending off to grandma as a birthday or Christmas card.

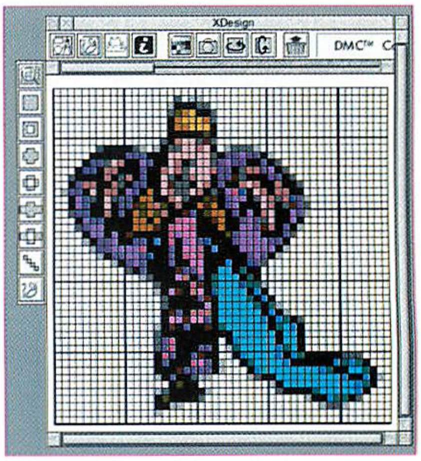


Imagine a sampler made from your child's first attempts at drawing the family — what an heirloom — absolutely crammed with memories and sentiment. There was no reason, apart from distance, why she couldn't have drawn directly onto the computer, using a painting program, which could have removed the need for extra computer hardware.



Conclusion

The cost for a prepared mass-produced embroidery design can be anywhere between £2.50 for a magazine, £4 for a designer pattern or £15 for a book of cross-stitch projects, so this program represents very good value.



This is a highly recommended and easy-to-use product even for the non-computer expert. It should enable many people to take control of the content of their cross-stitch designs rather than relying on others to determine what they stitch. A fine art approach to cross-stitch design is now possible. Well done iSV! A class product.

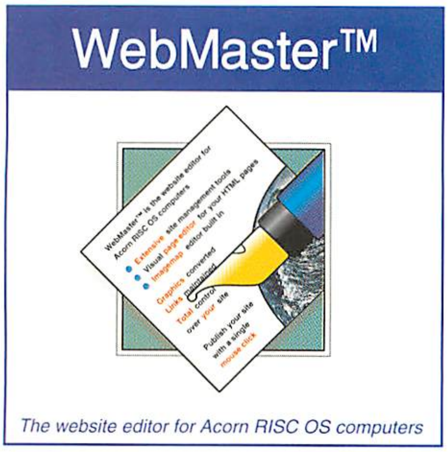
In school

Textiles teachers in a high or secondary school would find the program very useful. It is an easy way of naturally introducing the use of computers into the syllabus and the IT method could then be compared with the more traditional approach of colouring in squared paper — all good National Curriculum skills.

Product details

Product:	XStitch2
Price:	£36.50 (inc carriage). Upgrade from any version of version 1, £16.50 with master disc. Unlimited school site licence £71.50
Supplier:	iSV Products
Address:	86 Turnberry, Home Farm, Bracknell, Berkshire, RG12 8ZH
Tel/fax:	01344 55769
E-mail:	atimbrell@aol.com

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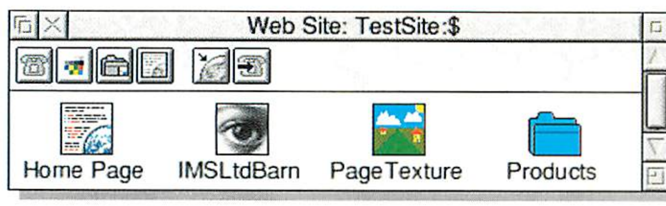
Easily create and maintain your website

Do you have free webspace with your dialup Internet account that you don't know how to use? Perhaps you already use your allocation, but find creating and maintaining your site a chore. Maybe you're forced to design your pages on a different machine because of the shortage of suitable software on the Acorn.

Whatever your Internet situation, WebMaster, the new web site editor from Innovative Media Solutions, is just what you need.

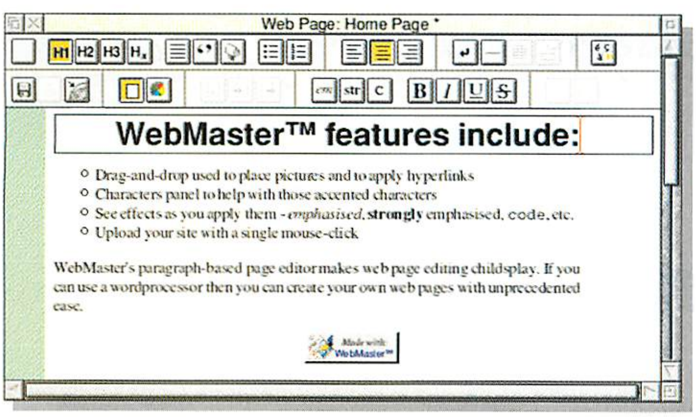
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'Publish' means much more to WebMaster, which is streets ahead of the others here – Acorn User, Sept 1997



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- Impressive control over the page, within HTML rules

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Box Bush Farm, West Wick, Weston-super-Mare. BS24 7TF
Tel (01934) 522 880. Fax (01934) 522 881
email: sales@ims-bristol.co.uk web: http://www.ims-cdc.demon.co.uk/

The state of play

Steve Mumford ponders the future of the Acorn games market

The run-up to the Acorn Spring Show and the subsequent few weeks saw some bitter, even vitriolic, exchanges on the *comp.sys.acorn.games* newsgroup. I'll spare



BHP – nice graphics but what about the gameplay?

those without Internet access the gory details but just to fill you in, the heated discussions were tending to revolve around '*My 3D engine's better than yours*'. I'll leave it at that — no names will be mentioned — but I think it's fair to say that there's no conclusive evidence available from either side, and certainly nothing as convincing as an actual finished game to play.

We've just taken delivery of the StrongARM, the fastest Acorn processor yet to be seen, but it's not magical — you can't knock up any old 3D romp and expect it to be miraculously playable. There's still a lot of thought required to make a game that stands out. Admittedly, it would certainly be desirable to have a 3D 'killer app' — perhaps that gap will be filled in the near future — but just because a fast chip is available doesn't mean we have to throw away all that we've learnt from the simple, but undeniably playable, games squeezed into the BBC Micros and ZX Spectrums of this world.

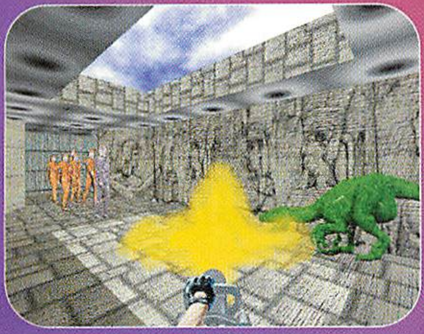
When all's said and done, the big question remains — what do you want from the Acorn games scene? What sort of products would you be willing to buy, and how much are you prepared to pay for them? I think the difficulties of producing earth-shattering titles across the whole range of Acorn machines are well understood, and I would hope that few people would complain if a graphically intensive product doesn't appear on the slower machines out there.

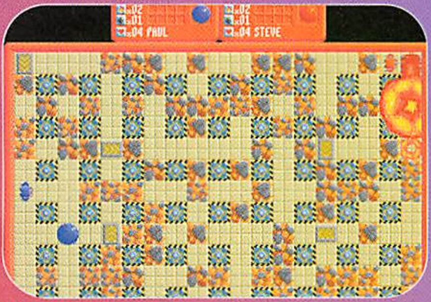
You don't need a turbocharged StrongARM and heaps of RAM to power a playable game — most of my all-time favourites, including *Spheres of Chaos* and *Stunt Racer 2000*, play perfectly happily on the earlier Acorn machines. It wasn't the games' graphical splendour that endeared them to me but the actual design of the game — a combination of playability, controllability and originality.


Spheres of chaos - a simple game with good gameplay

Marsquake is on this month's cover disc. The creation of the game was featured here over several months and it's already become another of my firm favourites due to the diversity of its elements and the sheer enjoyment factor of its multiplayer mode.

Admittedly, games such as *Tomb Raider* or *Resident Evil* benefit from the technological wizardry that lurks under the hood of a PlayStation or PC, but if you step back from the shelves for a moment, you'll see there are very few original styles of game on show. I lost count of the total number of *Doom* clones some time ago, and the number of *Quake* lookalikes appears to be increasing rapidly.


The Acorn needs a good 3D shoot-em-up – will Destiny be the first?


Marsquake is on this month's cover disc

Although there are a lot of games out there, that doesn't mean to say they're all good. It would be nice to see improved graphical performance available for the Acorn range. With the increased prominence of packages such as *TopModel* and *DaVinci*, perhaps one day we'll see a graphics accelerator appear for the Acorn — whether it's a native version or a cannibalised PC card.

However, let's be realistic for a moment. Unless we see a radical leap in the Acorn user base, we're unlikely to receive many of the big name games from the PC or console markets directly. There are the odd exceptions, of course — I could mention *Starfighter 3000* — but I'm sure that will be the general situation.

I'm not convinced that 3D is a necessary prerequisite of a supremely playable game, and by sparing the StrongARM the associated graphical machinations, its power could be used to boost the depth of a more conventional game. Simulations would be ideal, and a style I'd like to see make an appearance on the Acorn is that displayed in the *Legend of Zelda* series — an overhead-view roleplaying adventure where the emphasis is on exploration and discovery.

The verbal skirmishes that are going on in the newsgroups can be optimistically described as 'provocative', but for the most part I'd prefer to be reading something a little more constructive, or indeed playing one or more of the games that the combatants keep alternately attacking and defending so vociferously.

My point is that 3D graphics aren't necessarily important, and that authors should spare a thought for the actual gameplay. Most importantly, the Acorn games scene isn't big enough for people to make enemies, and I think what we need more than anything right now is a little bit of cooperation.

GAME SHOW

A gun barrel in the flowers



Graham Nelson gets up to a bit of Henky Penky with the new release from The Datafile

The oddly named *Emotions — Search for Humanity* is the new game from Acorn developer, The Datafile (in association with GEK programs). Any company developing Acorn games is a good sign, and *Emotions* — though not the most original game ever coded up — is a solid and richly enjoyable piece of work.

Supplied on three discs, Emotions has an easy installer program and I had no trouble getting it started — which is to say, launching it into its animation sequence, because the game kicks off with a cartoon to 'explain' the plot. 'Explain' in inverted commas because if there's a plot then it's better hidden than the red key on level 17, and if this story explains anything then I'm a Dutchman.

The animation

Still, here goes — our hero is 'Henky Penky', which sounds as if it ought to be the name of one of NASA's Martian rocks — Barnacle Bill, Yogi, Mr Frog and so on. In actual fact Henky is a young man who badly needs to get a life, or, as the game quaintly puts it, — Emotion.

He slides out of his bedroom and ambles along the street, dumb jawline thrown forward, like something out of *Beavis and Butthead*. Then it's into the car and via an American-style cityscape to an American-style library, complete with American-style white-haired lady librarian. Did I happen to mention that the whole effect is faintly American? Fans of *The Simpsons* and *The Far Side* will be on homeground.

Henky looks up 'emotions' in a bestiary (natch) and decides that he must visit a parallel universe. But where will he find one? The librarian, coping admirably well with this most tricky of reader enquiries, points him to a nearby Chinese takeaway.

Configuration

Nobody would want to sit through the animation every game – you can skip ahead by pressing escape to load the game and miss the intro. Pleasingly, *Emotions* is openly configurable. This allowed me to get into the game proper — I simply changed the preferences file to 'intro=off'.

Other alterable settings include the keys used, the level of goriness — I recommend 'blood=5' — the music used, its volume and so on. Since the default is a maddening bit of funky disco music reminiscent of the BBC2 test card back in the old days, 'music=off' will be found essential. Emotions will also let you play your own music via a CD player, if one is fitted.

And play

The cartoon-look continues into the game, which is consistent and colourful if slightly hippy — the monsters seem to have walked out of a 1960s underground comic, or one of those ads in *Private Eye* for dubiously legal cannabis substitutes. But no flowers in rifle barrels here, quite the reverse — there's a great moment when a bunch of flowers suddenly pulls a shotgun and shoots you in the back, and there's mayhem that would put Quentin Tarantino to shame.



Henky is faced with chainsaws, dynamite, lasers and stamping machinery aplenty. Sometimes he turns into a winged angel — no idea why, but this doesn't seem to make anyone happier to see him.

I've written so much about the design because in some ways that's the best thing about *Emotions* — the game itself is a fairly routine scrolling platforms-and-ladders exercise, albeit a generous-sized one. Henky collects 'emotions'; for instance, blobs with faces on — smiley, grumpy or just gurning at random. Trees, ladders, lifts and well-shafts form the verticals; branches, platforms and the ground are horizontal. We have keys to unlock force-field-like barriers, objects such as crates to shift about and so on. The game has a varied stock and a good-sized menagerie of monsters to tackle.

The aforementioned dynamite is used to blow holes in the map, thus opening up new seams of game — Emotions often reminded me of *Lemmings*, and never more so than here. The game is not always completely fair in what it will and won't let you detonate — but it's still a cute feature.

So this is a good implementation of a basically standard game, distinguished more for its artwork than its ideas. I'll certainly be looking out for more from The Datafile in the future.

Product details

Product:	Emotions – Search for Humanity
Price:	£19.95 + £1 P&P
Supplier:	The Datafile
Address:	Willoughby House, 89 Woodville Road, Boston, Lincs, PE21 8BB
Tel/Fax:	01205 354203
E-mail:	sales@datstore.demon.co.uk
Requires:	Risc PC with at least 5Mb memory and 1Mb VRAM recommended
Pros:	• Consistent design and artwork • Plenty of good solid play • A variety of obstacles
Cons:	• Not too original

The end is only the beginning, **Greg Scott** sums up the results of the series

Acorn Virtuality

part 6

In this final episode of Acorn Virtuality, we shall be tying up enough of the loose ends in our code to make *AUAttack* a complete reality. The remaining jobs which need to be tackled are all fairly simple: we need to move some objects, add a sound or two, add some messages and perhaps a gun or button bar at the bottom of the screen. I have left these tasks fairly open-ended and unfinished so as to encourage you to expand and improve on them yourselves.

Last month we tackled the issue of adding objects to the world. Static objects, albeit an improvement, don't add a great degree of excitement to the game. There are many ways we can move objects around our virtual world, and all of them are fortunately very simple.

Last month I introduced the idea of representing objects in just the same way as the walls — using a two-dimensional byte array along with twenty tiles of graphics. The easiest way of moving an object would be to find its position in the *objects[ ][ ]* array, copy it to a new position in that array and then replace the old element with a '0'. This is exactly the way we'll do it.

Figure I shows the objects we have available. Tile numbers 10,15,17 and 19 represent a ninja warrior who lurks around the AUAttack world. To move an object of this type we shall have to add some code to the main() function. We won't need to add any artificial intelligence or neural networks to achieve this — both are completely unnecessary and would consume far too many processor cycles. We only have to give the illusion that our objects are intelligent, in as short a time as possible.

The easiest way to do this is to move the object a certain amount each frame. The amount we add to the x and y coordinates of the object can either be random, pre-recorded, dependent on the player's location or a fixed increment. For example, the easiest way of making an object chase the player would be to home in the object's coordinates on the player:

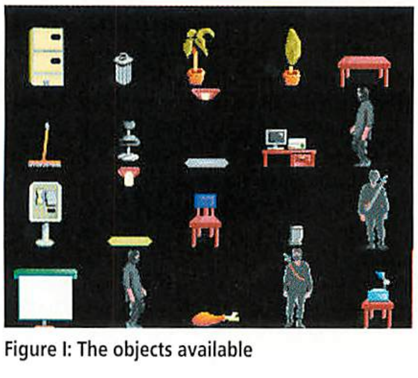


Figure I: The objects available

```
while(main loop is running)
{/* object movement code, make
object chase player */
if(object_x>player_x)object_x-;
if(object_x<player_x)object_x++;
if(object_y>player_y)object_y-;
if(object_y<player_y)object_y++;
}
```

With this algorithm in use it would probably appear as if the enemy was a Terminator — chasing the player relentlessly. We could ease it up a little by adding some extra logic to relax its tracking — a first step would be to stop the object walking through walls which can be done in exactly the same way as for the player.

As you can probably see by now, moving objects isn't a difficult task — one reason why I have left you to do most of it. I have started some of the code inside the *main()* loop. Believe me it isn't difficult, but before you grab the keyboard, remember these three tips:

- The rate at which objects move should relate to the frame rate, or otherwise things happen to quickly or slowly
- Be realistic, try and make objects move in sensible patterns



Figure IV: The AUAttack title bar

● The direction of the ninja is dependant on the player, so you will have to work out which sprite should be displayed.

Contact me if you run into difficulties on this one.

Additional graphics

Although you could use *ourlib_bitmap_plot()*, *ourlib_bitmap_grab()* and *ourlib_bitmap_scale()* for other graphics, these routines are slow and bound to lower the frame rate. By all means experiment with guns using the *ourlib.h* functions or any sprite libraries you might have already written. There is a glaringly obvious way of adding a sprite or title bar below the ray cast window — and without using a single extra processor cycle. Figure IV is the sprite I shall use as the title bar, of size 320 x 50 pixels, and Figure V is a screenshot from this month's software.

Because we are able to move the main graphics window upwards (by making the screen center variables 100 instead of 128), the sprite below (from height 200 to 256) is completely untouched by any rendering. Because it isn't plotted over by the objects or walls we do not have to redraw it each frame. It only needs to be plotted once, outside of the main loop.

Options

A 3D game could never be a success without a decent user interface. The norm' in the PC world is to incorporate a simple menu system which is navigated with the cursor keys. Though you may well adopt this approach for your own games, I've always thought that a 3D user interface would be enjoyable — a room with different options painted on the walls, shoot them to select or kick them to undo, that sort of thing. This would of course be easily achievable in AU Attack — only a few lines would be needed to set certain variables for each wall shot at. Give it a go.

A handy system used in the PC title *Quake* is that of messages appearing in the middle of the screen, at certain locations in the game, to aid the player in their choice of options or levels. This is as simple as it is useful — only a line such as:

```
if((player_x>>6)==5&&(player_y>>6)==
10)printf("This passage leads to
Level 2");
```

would be required, although of course an alternative to *printf()* should be used.

Gun shots

There seems to be a simple way of doing everything in AUAttack and this topic is no exception. In Article Four I introduced doors to the world. If you recall, to open them we had to cast out a door

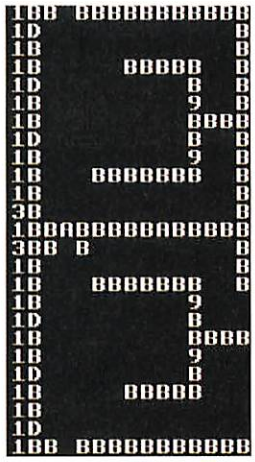


Figure III: Creating a mirror



Figure II: The new title screen

seeking probe to test if a door was present at a set interval in front of the player. Gunshots can be implemented in a similar way, but instead of having just one range of probe we use five or six — depending on the range of the weapon. Check out the new shooting code inside the *main()* function — it is very hard to distinguish from the door code.

The main difference in the two processes is that the gun doesn't remove walls, but objects. Currently when the fire button is pressed (I used the Right Ctrl key) any object in front of the player is completely removed. This is about as realistic as a cheese-wedge in a racing simulator — I'll leave it up to you to add some sort of fancy explosion animation. Remember that some objects might be shootable whereas others may not, so it may be wise to add some sort of filter for this before completely wiping out the object population.

Sounds

Included on this month's coverdisc is a voice module entitled *gunshot*. This ties in with the simple shooting code mentioned above — every time a shot is fired the sample is also played. The easiest way to make use of such a module is by loading it into the module area, assigning it to sound channel one, and then triggering the system beep — although if all is correct it should sound like a gunshot instead. Only a few lines are required for this simple system. We can place a lot of the work outside of the source code and in the *!Run* file, just before the command which calls the engine:

```
...
| New simple sound (gunshot) system
| We load in the module and assign
channel 1 to it

*RMLoad <AUARay$Dir>.gunshot
*Channelvoice 1 gunshot

| Call the engine
...
| Game is over, remove sound module
and bring back
| the conventional system beep
*RMKill gunshot
*Channelvoice 1 1
```

The only function we need to add to the source code should come after the *ourlib_keydown()* test on the fire button. To make the sound we don't need any fancy libraries or SWIs, we can make use of an old programming convention. The code:

```
putchar('\a');
```

is equivalent to a system beep command, but because prior to this function we have replaced the beep with a gunshot, this line triggers a different sample in place of the usual "WaveSynth-Beep" sample.

An update I won't be making to AUAttack is that of music — although I did get around to writing a theme tune with the PD editor !AMFTracker. The most common way of including music these days is to make use of the excellent shareware title QTMTracker, which provides star commands for playing and editing tracker files.

Mirrors

It might sound a bit out of the ordinary to start talking about such seemingly complicated issues as mirrors, but in fact there is a very simple way that mirrors (well, the illusion of mirrors) can be added.

Look at Figure III, a grid map which should by now be very familiar to you all. At first glance it appears as though the map defines two adjacent rooms, separated by a wall of Bs and As. But looking closer we can see that the "higher" room is in fact a reflection of the other — things might be falling into place now. The A mirror texture we can treat as an almost transparent tile (apart from shine or dirt) which separates the two rooms.

If you are still trying to get around this concept, all we need do to create a mirror is make an exactly reverse room behind the mirror, which we are blocked from entering. We can also put objects in the correct positions to further increase the effect of this clever illusion — which, incidentally, is also used in the current ➤

Acorn Virtuality

PC success *Duke Nukem 3D*.

The only remaining step would be to add an object behind the mirror, to act as a reflection of the player. To make the mirror even more believable, this object would have to alter direction as the player turned. All of these factors combined produce a surprisingly convincing effect, see Figure VI. This is yet more proof that even the simplest of engines can be made extremely versatile, with a little thought.

Improvements

There are a number of additions we could still make to the engine, some more complicated than others. Table I lists a number of possibilities and their typical difficulty. I feel as though I've left you out to dry by not entirely completing the game. I'm sorry, but I really want you to do this yourself. It will build your character, or something.

The future

I would like to remind you that if you ever have a problem with the code or some of the features I've added, or if you just fancy chatting about Acorns, I'd be delighted to hear from you. If all goes well I hope to have my first commercial Acorn release out by the end of the year, though currently it is in a very early state, see Figure VII. Incidentally the engine uses a very basic form of floor texture mapping, which can easily be applied to the AU Attack engine. If you'd like information on how to add floor and texture mapping please drop me a line.

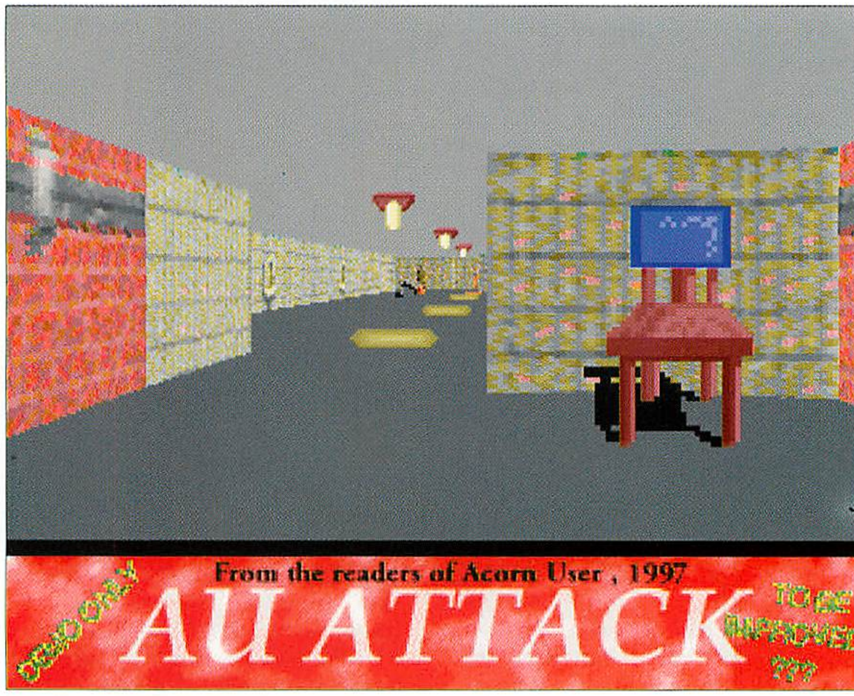


Figure V: A screenshot from the coverdisc

There isn't a great deal more I can say about 3D games of this level of complexity. You have the technical information you need. The rest of it is pure imagination, and you're the only one who can supply that. Hopefully, you can make your own completed masterpiece for your Acorn. Whatever motivates you, I hope to find some new explorers charting worlds within the

Due to space constraints we were unable to include the code for this issue of Acorn Virtuality. It will be on one of the October cover discs.

Contacting the author:
Email: AUThreeD@aol.com
Web: http://members.aol.com/AUThreeD/

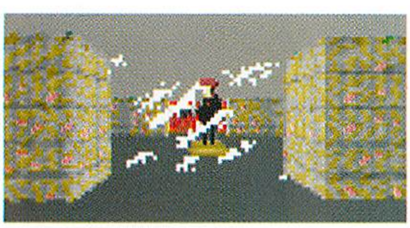


Figure VI: The mirror effect

Possible further improvements

Addition	Typical time required
Health/Ammo Feature	under 2 hours
More moving objects	under 2 hours
Cross Hairs on screen	under 1 hour
Plotting a gun	under 1 hour
Texture Mapped Floor	over 2 hours
Texture Mapped Ceiling	over 2 hours
Higher Resolution	under 2 hours
More colours	under 2 hours

Please contact me through the usual channels for detailed instructions on how these features can be achieved.

Table I

Further reading

There are four excellent titles which I both own and can recommend if you'd like to learn more about 3D graphics and simulations. All should be available from your local bookshop, though (as with most programming books) you'll most likely have to order them. They are listed in order of increasing difficulty:

Tricks of the Games Programming Gurus
SAMS Publishing
ISBN 0-672-30507-0

Gardens of Imagination
The Waite Group
ISBN 1-878739-59-x

Computer Graphics - Principles and Practice (in C)
Addison Wesley
ISBN 0-201-12110-7

3D Computer Graphics
Addison Wesley
ISBN 0-201-63186-5

The latter two titles require a great deal of mathematical knowledge and are more conceptual than the other two titles which are written in a more infor-

Visit the shape of the future.



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Ticket Hotline Number: 0181 982 6500

Rambles through Acorn Wood

Another question and answer session from **Mike Cook**

It has been exercising my mind for some time as to why PCs are so numerous? I refuse to say popular as most people who use them don't like them, or at least are resigned to thinking that this is the way computers must be. They are clearly inferior in design and implementation, heavy on resources like memory and hard disc space and have expensive software.

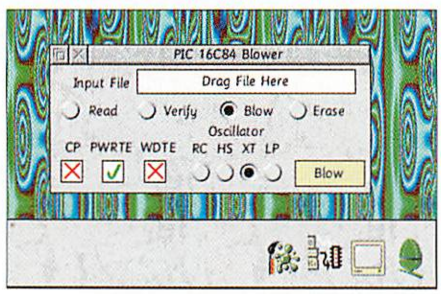
I have come to the conclusion that people, in the mass like rubbish. They actually prefer inferior things. I noticed this by looking around at other things that are inexplicably popular. Take trees, everyone likes deciduous trees, so what do the Forestry Commission do? Plant conifers — whole hillsides of them. Teach people to read and what do they read? *The Sun*. Give them TV sets and they watch games shows and soap operas. The most popular car is a Ford. We had 18 years of Tory government. And the list goes on.

So you see the malaise is spread deep in our society. It's not even a choice on price. I've had jibes from a PC user about my computer — can't you afford a real PC?. I'm sad to say Acorn computers aren't bad enough to be popular — maybe that should be our new slogan?

Mind you there is a problem with the Acorn desktop that many developers don't quite realise. It's fine having a choice of desktop fonts but it can lead into difficulties due to the different amount of space each font takes. For example I have my system font set as Sassoon.Primary, because I think it looks the most elegant. However, if I write a desktop application I have to be aware that someone might be using a different font. This could cause some parts of the lettering on an icon to disappear or overlap. I try to make everything work with the system font — it's ugly and the windows look cluttered but it is the standard.

I took my latest application into the University where the font is set to Homerton.Bold — this is wider still, and my carefully planned windows looked a mess. It's probably because I am trying to cram a lot of information into a small space but I do wish everyone would use the Sassoon, otherwise I'll send round the Style Police. Meanwhile, if you are having trouble with a window where the labels don't fit right then try changing the desktop font.

If you are interested in my PIC programmer this month you might like to check out some related Web sites. At http://hobbes.king.ac.uk/matt/pic Matthew Rowe has one with some Acorn specific material. Most sites use PCs but the application examples can be used with my system so they are worth looking at. One of the best is http://www.man.ac.uk/~mbhstdj run by David Tate at UMIST, this also has lots of links.



On the subject of the Net, Dave Walker from Acorn sent me some information about the latest podule specification:

Just read your July column, the expansion card spec is still available from us on the ftp site. Take a look at ftp.acorn.co.uk:/pub/documents/products/ExpSpec/ and you'll find it as both an EPS and a Spark archive of Drawfiles. It's been enhanced somewhat following the launch of the Risc PC to address DMA issues and so on, it's quite likely that the copy you refer to is an older one.

Never let it be said that I am not open to criticism, Mr. Smith from just round the corner in Wilmslow takes me to task over my May article about measuring AC signals:

The first page of this article (page 73) was somewhat below your usual standard. In the first column, halfway down: 'Now most people know that the mains voltage in the UK is 240 volts....', the nominal supply voltage in Great Britain was 240V (statutory limits ±6%) up to December 31 1994. As part of a European alignment, on January 1 1995, the nominal supply voltage changed to 230V (statutory limits +10%, -6%).

In practice the voltage did not need to change except for a 1.4V reduction in the upper limit. Thus you are probably correct as far as the true value of the voltage in Great Britain is concerned. The limits are due to change again in 2003. In Northern Ireland the nominal supply voltage prior to 1995 was already 230V and remains so.

Starting at the bottom of the first column, the simplified explanation of RMS value could be misleading — in power engineering the average value has a non-zero value which is the average taken over a positive half-cycle, i.e. $2/\pi^*$ Vp. In general the average value has nothing to do with power so should not appear in the discussion.

Squaring is not a mathematical trick but follows from the instantaneous power in a resistive circuit being V^2/R. Taking the square root is not an arbitrary ploy to reduce the number but follows from averaging the power over a cycle which gives $V_p2/2R$, then if V is the d.c. voltage which produces the same power in the same resistance we have $V^2/R = V_p{}^2/2R$, hence $V = \sqrt{(Vp^2/2R)} = V_p/\sqrt{2}$.

When presenting material for a non-engineering reader it is surely better to use the approach you have used immediately above the formula and present the result. On looking further through the article I am puzzled why you provided this derivation of RMS value when it is not really used in the rest of the text.

In the second column above the formula: 'the RMS value is equal to the square root of two times the peak value,' conflicts with the formula.

Ouch, slapped hands for me, the last point is purely my mistake, I meant to say one over of the square root of two times the peak, that is 0.707Vp. I always remember the number as it was the name of the first aeroplane I flew on.

Your second point is a matter of opinion, I find that most people go blank when a formula is inserted in the text so I like to avoid them as much as possible, preferring to get the concepts over first. It is a moot philosophical point as to whether the maths drives the universe or the universe drives maths.

The RMS discussion was periphery to the project so that's why I did not delve into the formulae. However, as the term RMS is so common in the literature regarding AC signals I thought I would offer some explanation. It will also pave the way for when I get round to doing a project on a true RMS converter. Finally thanks for all the information on redefining our mains voltages to suit those pesky Europeans— I wasn't aware of that. If you'd like more formulae and a more rigorous approach in my articles please write and let me know.

The next letter from Mr Gainham of Burton-upon-Trent might have been made redundant by the printer drivers on the July cover disc, but it still raises some interesting points:

I have been looking at Epson's new Stylus 600 printer with an amazing 1440 dpi. Anyone looking for a printer should consider it — the printout I received from it was better than a photo.

From Acorn dealers the full recommended price is £290 but shop around PC dealers and you can get one for £225, saving £65. Epson only supply PC or Mac drivers with the printer, is there or will there be an Acorn printer driver available?

Recently at PC World, I was told by a 'technical' chap that I would not be able to get 1440 dpi on my Acorn side due to the fact that the Acorn prints only one way chatter and all information is sent in one go, whereas in Windows 95 it spools out the information a bit at a time — I hate to say it but I prefer this idea, it means you can get on with what you were doing.

Similarly, scanners and digital cameras can be

bought a lot cheaper in the PC market, but it comes back to software again. I can see that there must be many circumstances where this situation arises and Acorn users wonder what they are actually paying for.

I know that to see Acorn computers grow to their rightful status as one of the leading computers on the market we should support Acorn dealers, but £65 is a lot of support to anyone.

Not being technically minded, is there somewhere I can get information on what can be connected to a Risc PC, without pestering dealers who obviously want to sell you the product anyway.

To show that I've not been totally brainwashed, they say that there is always an exception to the rule, and one-time champion of the Acorn platform, Watford Electronics are selling the same printer — the Epson Stylus 600 — at a staggering £393.60 (a difference of £160). If it's not a misprint then I can only assume that they are trying to get their own back on PC users, either that or they don't want to sell any and are pushing other brands. I hope that you can help me with my situation and give me some suggestions on the above problem.

I thought you might like to have a good laugh at the ignorance of the so-called technical chap at PC World; as you now know there is a driver for the 600 available. I have not checked that particular one out but have tried the one for the Stylus colour printer. Sadly it is worse than the last driver, the colours look washed out, there is sometimes a black line down the right hand side and bottom of images and at the high resolution pictures are blurred. I still get much better results from my Mac.

If you prefer the idea of background printing then it is available in the latest printer driver. There is an option box in the printer control filer that enables background printing or spooling. When you use this you'll need plenty of room on your hard drive as it can create large temporary files. As the default condition is off maybe you've not come across it.

You do raise a serious point about pricing and peripherals. It's true that a high volume box-shifter is going to be able to undercut any reputable dealer, and it's your choice where you buy from. There are no simple rules to follow to know what is compatible and what is not, apart from avoiding PC internal plug-in cards. As you rightly say it's mainly a matter of software drivers. You will find that most Acorn companies making drivers for the likes of scanners, printers and cameras are willing to sell you them separately but you might find the price is the difference between the cut price and the full price.

Also there is a reluctance to invest in writing software for a manufacturer who might be here today and gone tomorrow — remember what happened when I tried this with the PC FM radio. The main snag with buying from a non-Acorn savvy source is what happens when things go wrong. 'Well it's not fully compatible is it!' would seem to be the standard response. But Acorn dealers have a responsibility too, while the Acorn market is not a golden egg you mustn't kill off the goose that you have. There is not an easy answer and it's a problem that I fear will rumble on forever.

Robert Walters from Spalding is puzzling about a music upgrade, he writes:

I currently have an A3000 and A4000, both RISC OS 3.1, 2Mb RAM and a parallel printer, and I am looking to buy a Yamaha keyboard to use mainly with *Rhapsody*. I am considering two different setups:

- The PSR-320 has standard MIDI connections. What extra hardware would I need to connect this, and would there be problems moving from one machine to the other?
- The more costly PSR-620 has a 2DD 3.5in disc drive, which says it saves in standard MIDI file format on DOS 720K discs. This should remove the need for extra hardware, but could it be made to work with applications expecting a MIDI interface?

Which option would you recommend?

I would recommend the first suggestion. For your extra money you are only getting the option to save a MIDI file on a disc. While you could read this disc directly into your computer and transfer files from there into the keyboard, this is not as flexible as being able to communicate directly between keyboard and computer. Use the money you save to buy a MIDI interface.

There is a slight snag here in that the A3000 has a non-standard internal expansion card so you would have to use either an external card system or a separate interface in each computer. That is unless you can find a MIDI interface that plugs into the printer port. It's not impossible to do, but I don't know of anyone making one.

Denzil Millichap from London is trying his best to be a green consumer:

I am trying to 'recycle' a Philips monitor used with an old 386 by connecting it to the RGB output from a VCR — this is so that I can check on progress while a tape of a TV show is being copied without the adverts while watching something else on my main TV.

It seems a waste to throw away a monitor when it could be used in this way. The monitor has a standard 15-pin D shell plug. The booklet describes the function of each pin and from the Net I have wiring diagrams for SCARTs but not a diagram that definitively addresses the wiring from a SCART to such a plug — one diagram I have seen included resistors — for an Acorn.

The RGB output is from a SCART/peritel socket of a peripheral device which I can feed with VCR output to produced RGB output from the SCART. Do you know of a wiring diagram or lead/connector for this sort of connection?

The problem here is that despite appearances a computer monitor for a 386 is not a TV set. Broadcast TVs have a line sync rate of about 15KHz — it takes 64uS to scan one horizontal line.

This is fine for images viewed at a distance but for the high information density on modern computers this is too slow. In the early days computers could make use of a TV set but with any more than a 320 X 256 pixel display it was quite fuzzy and unreadable. So manufacturers increased the scan rate to 30KHz so that they could squeeze more information on the screen. This meant quite a redesign of the monitors circuitry to make it work.

It is possible to design a monitor that will lock onto a range of frequencies — these are the so-called multisync monitors which are more expensive than a single standard monitor usually used with the 386. So unfortunately you will not be able to do what you want to with your monitor.

D Wookey from Aleph One Ltd springs to the defence of the !PC card:

Just a word to point out something you said recently in AU that is rather misleading about the PC card. In the July 97 Acorn Wood you suggest that direct access to the serial port hardware will not work.

It's not that simple — as I'm sure you know really. Almost all PC-serial access is done via direct access. No-one has used the BIOS for years because it's dog-slow. So in general, direct access works fine. However, as you are aware there are various bits of hardware that don't work well at all. PIC programmers seem to be one.

I would be interested to hear details of problems you know about to see if improvements can be made. There are some serious limitations, primarily because the serial access has to be controlled by RISC OS not the PC card, as interrupts go to RISC OS and by the time the PC card gets to hear about them it is way too late. This means there is a big buffer, so the PC-side can have trouble trying to control the data flow as it expects to.

Thanks for that, the PIC programmer used the parallel port directly but it is the same tale. I think it fell down on the direct access to some timers. I have heard that several communications programs for receiving weather fax images from short-wave radio now work when a StrongARM chip is fitted. This makes sense as the RISC OS side can service the requests much faster with the new chip fitted. AU

From: Denis Howe <dhowe@linklaters.com>
Date: Mon, 02 Jun 1997 13:30:35 +0100
To: paul.NCS@paston.co.uk
Subject: Archive magazine

I just had to email you to say how excellent I think Archive is. I've known of it for years but only recently subscribed in response to the ad I received through the post.

I wish I'd subscribed ages ago, I guess I always imagined it was one of those sad little "This is *your* magazine, please send an article" fanzines, but now I discover it's stuffed with a wealth of authoritative, professionally presented articles, several of which were of immediate relevance to me.

Thanks and keep up the great work.

Denis Howe

The offer that Denis took up was: **£15 for 12 issues of Archive and a free copy of the Archive CD-ROM**. That offer is open to you as long as you've never subscribed before.

Send a cheque or credit card details to: Norwich Computer Services, 96a Vauxhall Street, Norwich, NR2 2SD. Phone 01603-765073, fax 764011, email <paul.NCS@paston.co.uk>

Prepare for attack
with **Dave Acton**
and **Dave Lawrence**

star info

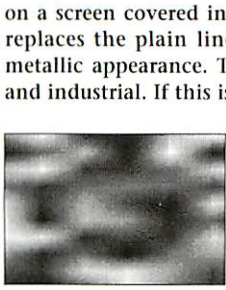
Manic carpet preacher

Author: Philip Mellor

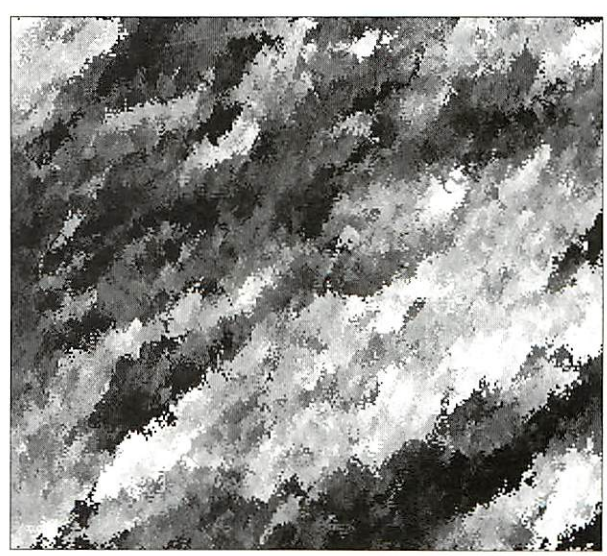
Recent *info regular **Philip Mellor** continues to demonstrate the sort of weirdness that lives in his head with a trio of *info stalwarts. *Carpet* draws a psychedelic carpet using the *ColourTrans* module. The screen is split into a series of squares, each corner having a different colour. The squares are then drawn by blending the colours from each corner. The result is more like a mid-70s *Top Of The Pops* video effect than a carpet – especially if you run *CarpetA* which is Philip's animated version of the same display. This uses Mode 12 instead of Mode 15 thus allowing the palette to be cycled in the time-honoured fashion.



Philip's second program *NBfill* is based on a previous submission from Jan Vibe. Jan's original performed a slightly warped flood-fill on a screen covered in a smattering of dots. This updated version replaces the plain lines with shaded ones which gives a shiny, metallic appearance. The final display is quite three-dimensional and industrial. If this isn't enough, there's always *NBfillA* which as you might be able to guess, performs colour cycling after the image is complete.



The last program in this set is *Textured* and draws a fairly standard granite-like chunk of rock or cotton wool or whatever. The 'A' version of this though, with the colour cycling, is altogether more animated so to speak – although ironically it's a shame that the texture itself doesn't move. Still, some really rather drastic colour shifts do occur making a very striking display.



Break the mould

Author: Jonathan Stott

Our continuing series of 1K games is proving very popular - it goes to show that Mip-mapped polygons are all very well but a little gameplay doesn't go amiss sometimes — although, saying that, it is hard to beat MDK. As you may have noticed, we have two 1024 byte games this month. Here we have *MouldSplat* which has been lovingly handcrafted by **Jonathan Stott.**

'MouldSplat is a little 1K ditty which crams about as much addictiveness into as small a piece of memory as is realistically possible. It took about 30 minutes to write and a further hour to optimise the code down to exactly 1024 bytes. The basic gist of the game is simple, and is based on an old Electron game from back in the '80s, but this is much better and probably takes less memory to run!

'You are a flying-saucer-type-thingy on a planet millions of miles from Earth, — flying over an area where mould grows at a phenomenal rate. You have been employed by the local government to eradicate the ever growing mould population on the planet. Unfortunately, the mould emits harmful rays which damage your ship when it gets too close. You can only afford to make this mistake three times, otherwise it's the end of the game.



'To stop the mould growing, you must drop bombs on it. This will cut back the mould in a small area. Each level lasts one minute, and if you survive the whole minute, the mould suddenly shrinks back to nothing and starts again. The further you progress into the game, the less powerful your bombs get, and start destroying less mould.

'To release a bomb, press Space — try holding the key down and releasing it when the bomb is aligned with the mould. Don't release another bomb before the first one has landed because the first bomb will self-destruct and fail to land.'

Jonathan claims he has reached level 21 and we don't doubt him. He says that a score of around 9000 (level 10 or so) is quite respectable. I don't know what he'd think of the *info hi-score of 500 - although we have found a way to cheat!

On a bender

Author: Edward Smale

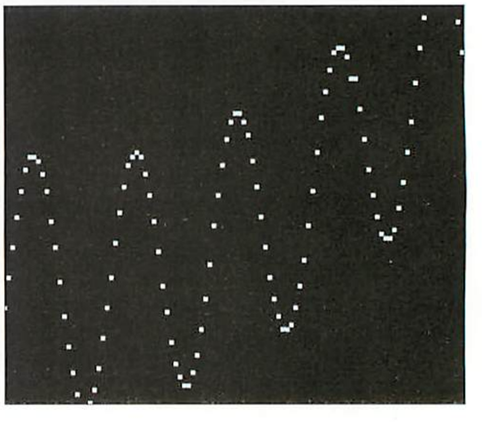
Our call for more audio demonstrations is obviously working — aside from our 'creepy' challenge which *can* include noises — **Edward Smale** has sent us a short routine that produces bizarre sounds through frequency modulation.

It first generates a couple of random waveforms — either square, sinusoidal, pulse and saw-tooth, these are then interacted to produce a sound.

Any old BBC game fans will probably fondly remember the wonderful *Neee-warrnneeeewnwaaaa* noise at the start of *Defender*, (sorry, *Planetoid*). This of course was followed by about five seconds frantically hammering the keyboard and the inevitable scoring of about three points.

The sound is constantly changing, and therefore the program should produce a slightly different result every time. In addition, it is possible to alter the 'level' of interaction of the various waveforms by moving the mouse — both X and Y directions control different parameters.

With the recent revival of all things analogue in the music world, perhaps someone would like to turn the bare bones here into a full-blown TB303 emulator.



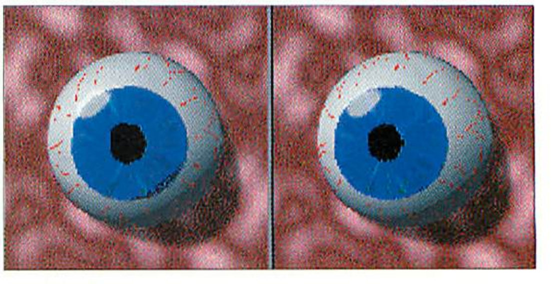
Ice pie

Author: Matthew Hammond

If you're bored of *!Watcher* or *!BabyBlues* then **Matthew Hammond's** *EyeWitness* may well be just the thing to keep an eye on your desktop. Running the application will add an icon to the iconbar, click this to bring up the eye on the desktop. You can drag it around the screen with the mouse. A menu is provided — this allows you to quit, close the eye, send it to the back (of the windows) and add or remove a title bar. Only one eye is available per copy of *EyeWitness* loaded — if you'd like a pair of beadies watching you, you'll have to load two copies.

Matthew says that the program was inspired from a picture of a similar program running under OS/2 in a PC mag — he couldn't bear not having something that good — all light shaded and textured on the Acorn desktop.

The program uses pre-generated mapping tables, for texturing and lighting, and colour shading. So none of the difficult 3D projection maths or colour matching is done in real time. This makes it as fast as possible running in the desktop. The core machine code renders onto the background sprite, which is then plotted onto the screen with colour mapping using OS calls, so it is viewable in all screen modes.



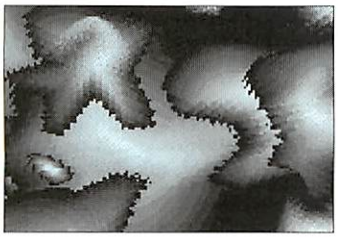
It's the operating system's job that is by far the main speed overhead. While still being developed, outside of the desktop, when none of this is needed, it flies, even on an A4000.

The graphics data itself is *not* hidden away. In the Resources directory are two sprite files — *Background* contains a 128x128 256 colour sprite which is used as the base pattern, note that the shadow is included in this bitmap. *Texture* is a 256x256 sprite and is obviously used to map around a sphere to make the eye itself. If you'd like to add a few bloodshots for that genuine Saturday night look, then do feel free.

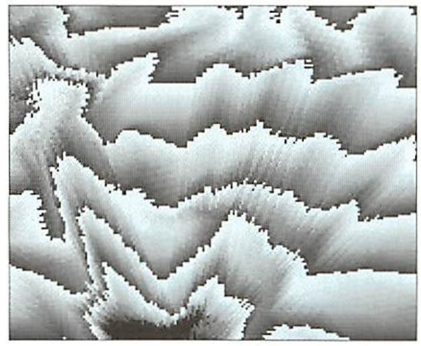
Chomp and see

Author: Mark Adcock

Even if Mr Vibe is not immediately to hand, his influence often extends to those nearby. These two programs *Chomper[1]* and *Chomper[2]* by **Mark Adcock** were inspired by a routine first mentioned by our man Jan back in early 1996. Jan's PROCL function (a nice meaningful name) could scroll an arbitrary line segment around the screen, using this he was able to come up with a number of interesting displays.



Mark has not used Jan's function directly but has written his own interpretation of it using the description in the article rather then any actual code. The *Chompers* plot sets of concentric circles and bands of bars respectively. Pieces of the screen are then moved from the edge towards the centre giving the impression of the (black) border encroaching on the screen. Sometimes the random algorithm will switch tack and concentrate on one part of the screen for a few seconds to add to the effect.

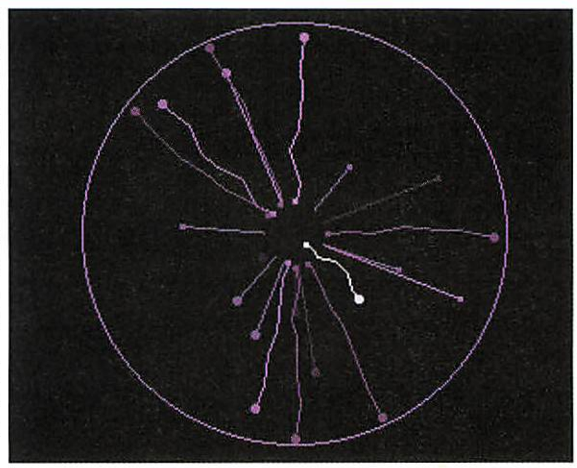


Pressing Space temporarily stops the process and colour cycles the palette, a second press restarts the chomping.

Plasma attack

Author: Nigel Stoner

Nigel Stoner is a name not entirely unfamiliar in these territories and indeed plasma is no stranger to these parts either. The former has been experimenting with the latter and the result is a pair of 3D simulations of one of the more exotic executive toys - the plasma ball. You know the thing - a glass ball with a ludicrously high voltage inside causing little bolts of purple mini-lightning to shoot out to meet your fingers. Only a couple of hundred quid from your latest gadgetry catalogue or save your hard-earned pennies and run these demos from Nigel instead.



PlasBall is the basic version. The plasma bolts are genuinely 3D and move around a 3D globe as only bolts of plasma can. Nigel advises us to tell our friends that touching the screen causes the sparklets to cluster around your fingers. If you have the sort of friends who might believe such a thing, maybe it's time to get out more and make some new ones.

PlasBallXF is the 'X-Files' version (says the author). The viewer zooms in and out, offering close-up views of the ionisation in action and the added highlight of, well, an added highlight. Nigel did not include this in the original version for fear of burning a spot on your screen.

Ant attack

Author: Jean van Mourik

Lots of attacks this month — ants, plasma, whatever next? The attacker in this case is one **Jean van Mourik** of Dyfed. He returns to that old but tasty chestnut, the cellular automaton.

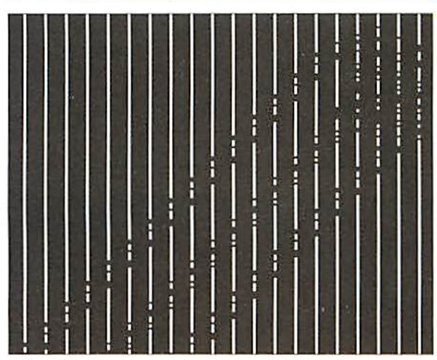
Ant is the simple version. The screen is cleared to a half-black/half-white state of play and you are cordially invited to place your 'ant'. Having done so, it munches its way around using the simplest of rules. The program is in BASIC and only a few lines at that. The concept is the same as that employed by the famous 'Turing ant', a version of which we carried many moons ago. There was an 8-bit machine-code version as I recall, so that'll give you an idea just how many moons we're talking.

Basically, the ant can move in one of four directions. The direction chosen depends on the colour of the pixel it is standing on. And as it wanders about, it changes the colours of pixels visited using a simple formula. The result is a creature which follows a two-dimensional 'program' over the surface of a little wrap-around world.

Ant2 extends the idea, and should probably be called *Ant3* since it follows the fortunes of three of the little formicant blighters. These are more advanced in that they can move in any one of eight directions.

When two meet, they sometimes start undoing each other's tracks. Of course, if there were only two ants, the system would settle into a repeated cycle — an *attractor* if we were to talk in terms of complex numbers. Hence the reason Jean chose three — the 'gooseberry' ant will always be hanging around to upset any plans the other two might have of settling down.

Jean says, 'It is interesting to watch the process evolve. To make things even more interesting, there is a horizontal line which when met by an ant, forms one of many



possible intricate trails. Although rare, an ant can settle into a diagonal path on its own. I've seen it happen only twice. With just four directions, these paths occur much more frequently.'

Just in case you spot such a rarity, the initial parameters are displayed upon Escape so you will be able to recreate the experience.

SOFTWARE SHOWCASE

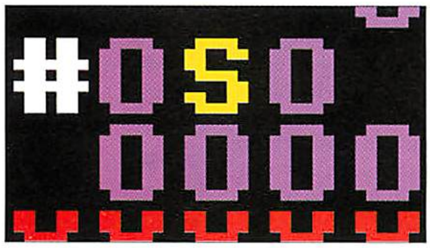
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Trap happy

Author: Rob Jeffs

Yet another 1K game — this one from regular **Rob Jeffs**. Rob was inspired by that old Beeb game *Purple People Eaters* — revived more recently by our own DL in the shape of *Grey People Eaters* for the Pocketbook. This 1K version of the classic game features all the original, well, features I suppose. These being the ability to move around (using Z, X, K and M) and push the blocks (or 'O's to give them



their correct, technical terminology). As ever, the object is to trap the baddies using the blocks so they can't move.

The block moving is done recursively, which is nice. You can also up the number of baddies if it's all too easy for you (*T* = baddies - 1). As always, I'm utterly abysmal at the game, so I'll be reducing the value of *T* myself.

A new Vibe-ration

Author: Jan Vibe

Long-standing readers will know very well that Mr **Jan Vibe** can work wonders with the old graphical block move.

His latest work *Distort,* takes a Sprite and randomly moves a large chunk of it one pixel left, right, up or down.

If you haven't got a handy 256-colour sprite just press Return and a sample screen randomly filled with circles will be used instead.

If you have a StrongARM, an impressive frame-rate is achieved, especially considering the program is written entirely in BASIC with just a handful of PLOT calls.



Solar so good

Author: Scott Boham

A good, down-to-earth space simulation here from sixteen-year-old **Scott Boham** of Romsey. The space he's simulating is not the empty bit that occupies most of the universe, but the interesting bit around our own neck of the woods. *SpaceSim* simply shows the solar system. The distances and speeds of orbit are to scale. Use the up and down arrow keys to zoom in and out — the scale is indicated in the corner.

Right and left arrows accelerate and decelerate time, so you can see just how little Pluto has moved since Queen Victoria was a gal. Finally, the angle may be altered with / and '. Little details like elliptical orbits and perspective are not observed — anyone care to send us a more accurate model? — but this is no matter — the simple program gives a good idea of how long you have to wait for Christmas on different worlds.

Starry starry night....

We've had starfields aplenty over the years. We've even seen galaxies collide. This demo from **Scott Boham** is a little less dramatic, but rather pretty nonetheless.

A series of, well, galaxies I suppose, are plotted around the screen. A simple procedure is involved, which just picks random angles and radii from a galaxy centre, and plots single pixels using a sixteen colour greyscale. The result is surprisingly realistic for such a short piece of BASIC.

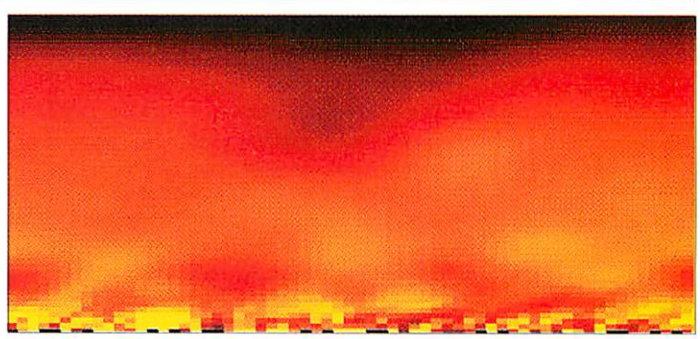


Firestarter

Author: Thomas Madams

You may remember that our dear friend Jan Vibe did a flame-effect program some time ago by distorting a palette-cycled pattern repeatedly. For this latest in hot special effects, **Thomas Madams** has to resort to some nifty machine code.

'This program creates a nice fire effect using quite a simple method. First, 256 shades of orange are generated and these are stored as sprites in a look-up table. In the main program, a row of random colours are plotted onto the bottom of the screen and then an averaging loop is applied to it. Next the screen is shifted up by 4 pixels which makes the fire rise into the air.'



Formaldehyde and seek

Author: Chi Hirst

Seeking that desktop colour-scheme that is just a little bit different? Look no further. In the first two issues of 1997 we carried a couple of desktop redesigns by David Llewellyn-Jones in the styles of the painters *Pollock* and *Mondrian*. We foolishly asked if anyone could come up with one in the style of that ever-popular cow-pickling rogue, Damien Hirst. One **Chi Hirst** of Middlesborough (no relation she assures us) has done just that. As always, it will teach us to keep our big gobs shut.

'As requested, here is the Damien Hirst desktop. Unfortunately, the sheep has got lost, the formaldehyde is green, and for some reason its frantically rippling all over the place. So, other than the RamFS icon, it's got nothing at all to do with Damien Hirst. But its quite pretty, isn't it? (If you like that kind of thing.) However, I have probably been pre-empted by some smart-alec PhD student with a full-screen ray-traced Aberdeen Angus, preserved in a precisely modelled tank, so my feeble efforts will be rendered obsolete.'

Just double-click on *!Damien* to install the new look. Inside the directory you will find the following:



- *Backdrop* — the new backdrop sprite
- *Tile_2* — 16 and 256 colour versions of the new window back ground sprite
- *Sprites* — new RamFS and palette icons (if required)
- *Tools* — new tool icons, installed with *toolsprites
- *!RunImage* — a dummy program which just does a Wimp_Com mandWindow call to avoid the 'Press space or click mouse' message

I rather suspect we have run out of artists by now. Although a desktop *à la Picasso* might be nice. And how about a lovingly rendered 3D model of a dirty great brick train? Go on, surprise us!

Font? Easy (I learned)

Author: Keith Vernon

And even if you don't get the excruciatingly punny title, you will find it easy to learn how to use RISC OS font calls using this suite of simple demos from **Keith Vernon** of Southampton.

Double-click on *FontTrix* and a directory of BASIC demos appears. These all make use of a single font library *!FontTrix.Procs* which contains a comprehensive set of BASIC procedures for manipulating fonts.

These are:

- **PROCinitialise** — must be called first. This sets up an error handler to ensure the font system is tidied neatly upon Escape etc — this is why a few seconds may elapse before you get control back after escaping.
- **FNopen_font** — returns a handle for the desired font. The parameters passed are font name, x and y point size, foreground colour and tint, and background colour and tint.
- **PROCfont_scale** — plot scaled font. The parameters are font handle, text, x and y position, x and y scale factors.
- **PROCfont_SR** — scale and rotate font. Parameters are font handle, text, x and y position, angle (in degrees), x and y scaling factors.
- **PROCclose_font** — close the given font, i.e. tell the Font Manager that it is no longer required, so it can make the best use of the font cache. It is always good programming practice to ensure old font handles are closed.
- **PROCfont_arc**, **PROCsinewave** and **PROCcircular_string** are demonstrations of more advanced techniques, although the same basic font transformations are used.
- **FNscan_width** and **FNscan_height** are used to find the size, in OS units, of a particular string rendered using a particular font. Both take two parameters — font handle and text.

Spook too soon

If you are quick, there is still time to enter our latest challenge. The fairly open brief is to write a spooky program — it may just make a spooky noise, or draw a spooky pattern, or a combination of the two. Either way, the deadline is August 15. The best will be carried in the November issue.

*QUIT

All submissions — applications, doodles, hints, tips or whatever you fancy really, to our usual haunt please:

*INFO, *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP

or, if your submission is about **100K or less**, e-mail us (including your real address please) at:

austarinfo@idg.co.uk

You needn't include a letter but **please put your name, address and program title on every disc** and include a text file containing your name, address, disc contents and program details.

If you are responding to one of our challenges, please mark your envelope clearly with the name of the challenge for example, *Spooky*. A SAE will ensure your discs are returned. *info submissions only please. Remember that we only have limited space on the cover disc, so smaller submissions are generally more appealing than larger ones. If you have a copy of *SparkFS* or *Squash*, try compacting your program(s). We are rarely able to accommodate individual items of more than 50-100K when compressed.

Compatibility table

Program	RISC OS 2	RISC OS 3.1	RISC OS 3.5+
Distort	No	Yes	Yes
!Font Trix	No	Yes	Yes
ANT	Yes	Yes	Yes
ANT2	Yes	Yes	Yes
Mould Splat	Yes	Yes	Yes
PlasBall	Yes	Yes	Yes
PlasBallXF	Yes	Yes	Yes
Demo 1613	Yes	Yes	Yes
Carpet	No	Yes	Yes
CarpetA	No	Yes	Yes
NBFill	Yes	Yes	Yes
NBFill A	Yes	Yes	Yes
Textured	Yes	Yes	Yes
Textured A	Yes	Yes	Yes
Fire	No	Yes	Yes
Trapper	Yes	Yes	Yes*
!Damien	No	No	Yes
!Eye Witness	No	Yes	Yes
Space Sim	No	Yes	Yes
Stars	Yes	Yes	Yes
Chomper[1]	No	Yes	Yes
Chomper[2]	No	Yes	Yes

*runs a bit faster

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Mind blowing

Mike Cook gets blown away

Regular readers of my Rambles column might have gleaned that I have been experimenting with single chip computers over the last couple of years. In the February 97 issue of *Acorn User,* I described a serial to parallel interface controller using one of these type of devices. I intended to do a project about a chip programmer or blower, in fact I even made the prototype.

However, last year my attention was brought to a newer chip, the 16C84 PIC micro controller. This was different in that the other chips had to be erased with a 20 minute sunbathe under a UV lamp before you could re-program them, but this chip is electrically re-programmable. That means if you give it a pulse in the correct place, you can reuse it.

At about the same time, a 16C84 PIC programmer appeared in the September 96 *Maplin* magazine – although the kit was not available for some time after. I got the PCB but it lay dormant until I was prompted by a letter from Bill Jeffs. He found you couldn't use the PC software for this project on the Risc PC's 486 card. It turns out the software is making too many assumptions on the available hardware.

Rather than rewrite it, and so perpetuate the already mountainous software available on the PC, I thought I would make an Acorn desktop version, and that is my offering this month.

A chip blower is not much use on its own, it needs feeding with object files, so next month I will present an assembler. Finally it is useful to be able to simulate a PIC program to find out where you are going wrong and that will be presented the month after. After that, no doubt the PIC chip will find its way into a few projects. So, having charted the territory, let's see what we need to do.

The term chip blower might seem a little strange to the newcomer — its origin is historical. In the early days field programmable devices used very thin strips of metal connected to a diode matrix circuit. These could be subjected to a large voltage burst, causing heavy current to flow, melting the thin strips. Surface tension would then pull the molten metal apart and that connection would be broken.

This is just like blowing a fuse so the term blower was applied and it stuck, even though nowadays the programming mechanism is very different.

To program a link you need to induce a charge on a capacitor which, in turn, keeps a field effect transistor conducting — removing that charge removes the link. The charge leaks away slowly and so these devices are fine for about 20 years — once programmed.

The 16C84 is a fully fledged computer with ROM, RAM and I/O. It has an 8-bit data structure and a RISC-like instruction set.

The main characteristic of it, however, is that it has a Harvard architecture, just like the StrongARM chip. This means that the program memory and the data memory are separate so you can't store data over your program, or execute data by accident.

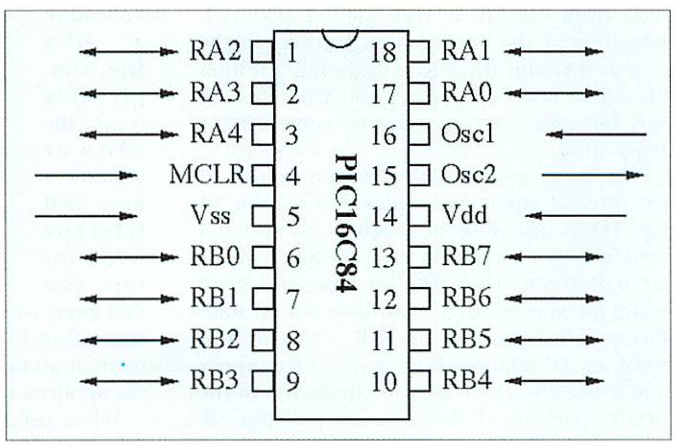


Figure I: PIC 16C84 Pin out

Figure I shows the pin out of the device and, as you will see, it mainly consists of input/output pins — there are 13 in all. Port A has 5 bits RA0 to RA4 and Port B has the full 8 bits, RB0 to RB8. These are fully bi-directional, meaning that any bit can be set as an input or an output. Some of these pins double up on functions for example, pin 6 can be used as an interrupt and pin 3 as the input to an internal counter. Also, some of these pins are used in the program mode. The Osc1 & 2 are the oscillator pins, this is a flexible part of the circuit and can consist of a simple RC, a crystal or a ceramic resonator. Pins 14 & 5 are the power supply and pin 4 is the reset line.

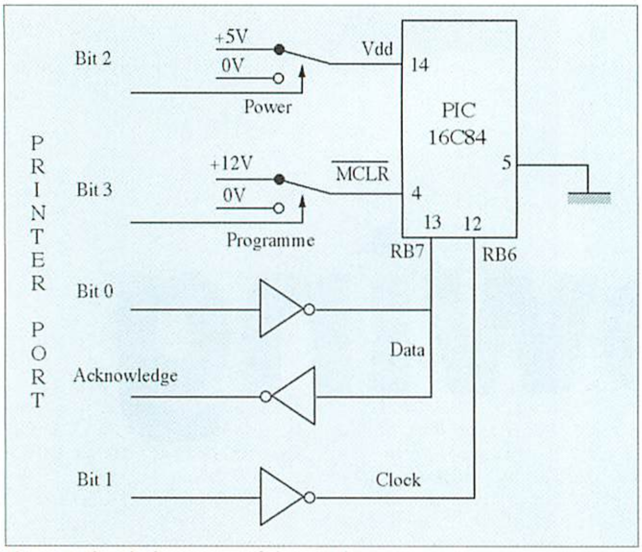


Figure II: The Block Diagram of the PIC Blower

Figure II shows a block diagram of the Maplin PIC blower and you will see that it is fairly simple. It is connected to five bits of the printer port, four outputs and one input. We need to control the power to the device so that we can safely turn it off when inserting it into the programmer, that's done by bit 2. Bit 3 puts the reset line up to 12 volts which places it in the program mode.

Finally, data is clocked in and out serially so we need a clock signal, bit 1 and a data signal. This goes into the PIC from bit 0 and data from the PIC is read on the acknowledge line of the port's status register. In the practical circuit the power and program lines also drive LEDs — they are not strictly necessary but give you the assurance something is happening.

The kit of parts together with a reprint of the original article are available as Maplin kit No. 95128. This does not include an optional zero insertion force (ZIF) socket which I would strongly recommend. The kit represents good value for money but if you have a deep junk box you can just get the PCB. You will also need an AC adaptor for the 15 volts supply and a D25P to D25P lead to connect it to the printer port. Incidentally I used a 24-pin ZIF which was cheaper than the 32-pin one used in the article. In fact you only need an 18-pin one but they don't make one that size so you have to use just the bottom 9 rows of the socket.

So onto the software. This will allow you to read, verify, erase or blow a PIC chip. In addition it allows you to set the configuration fuses for oscillator type, enable the watchdog timer, power up delay and code-protection bits. When a device is code-protected you can only read it back in a scrambled form, so protecting your code from theft. However, to reprogram a protected device, you have to first erase it.

Normally you don't have to erase it before reprogramming although the manufacturers do recommend it. I have found it works fine without. The program is fed into the blower in the form of a HEX format file — a standard file format used on many systems. It consists of a series of ASCII characters representing hexadecimal numbers.

Each line is a self-contained block of code, starting with a header giving the number of bytes and the address it is going to, then comes the data and finally the check sum. Each instruction in this PIC is 14 bits wide so they take up two bytes and while the processor is word addressed, the HEX format file is byte address.

This means, to get the real address from the file, you have to halve the address it gives in the file. To load in a HEX file, simply drag it into the blower window. I have used filetype &084 for this, can you guess why? When a file is loaded the configuration bits may change if it contained configuration information. See the helpfile in the application for further details.

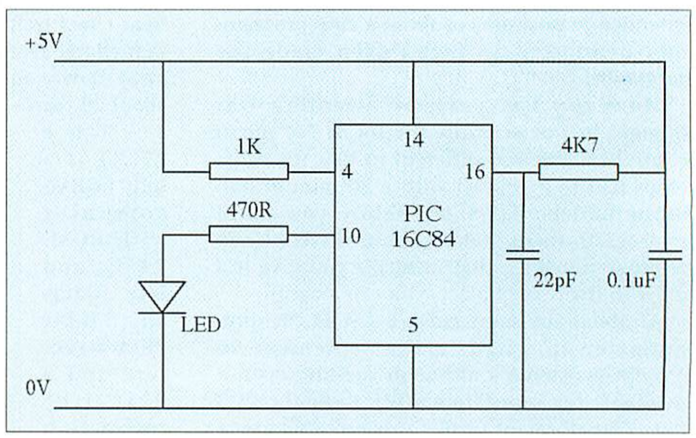


Figure III: Simple test circuit

When you have read a PIC you can save all the data, or just the program part, from the blowers menu. Well let's see if it works. Figure III shows a simple test circuit using the PIC designed to flash an LED. There is a public domain program to drive this which was produced by Charles Manning and consists of just six instructions.

This is called one/h on the disc. Drag this into the blower and set the oscillator to RC, the WDTE ticked, the PWRTE ticked and the CP crossed, then click on blow. After about 20 seconds or so it should report you have a successful chip. Transfer it to the circuit in Figure III and watch it flash. You can connect LEDs up to any of the other Port B pins and they will flash at different rates.

I know it's not very exciting but it's a start. With this you are now able to blow other peoples code into your own PIC. Next month I will show you an assembler so you can start writing your own. See you then. AU

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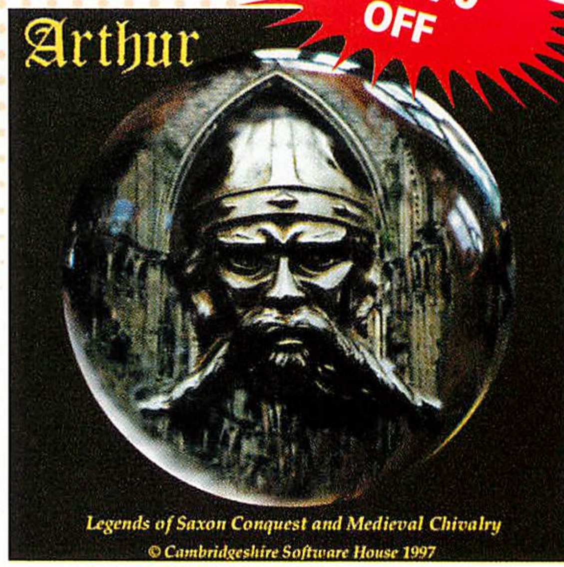
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Reviewed on Page 49 of this issue of Acorn User

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JACK KREINDLER

C for yourself

Steve Mumford introduces Acorn's outline font manager

Providing our own dedicated window redrawing functions has opened up a whole range of possibilities — the inclusion of custom sprites can provide your desktop application with a distinctive look and allows the creation of some simple games. Although the standard sprite calls aren't fast enough for large-scale window-based arcade games, they're good enough for simple puzzles. Because you can even redirect graphical output to a sprite, it's even possible to write a functional, although basic, sprite editing application with the knowledge we've gained.

However, sprites aren't the end of the road, and there are other goals on which to set our sights. One particular aim that I'll be working towards is the ability to send output to a printer — thanks to Acorn's printer driver system, this is very similar to the process of redrawing a window, and as long as you program carefully, the two processes can share some of the same functions. We've got a few things to cover before we reach that stage — the one I thought I'd turn to next is the process of plotting outline fonts on the screen.

Preparing to plot an outline font is a little like opening a file for read access — you have to locate the font you wish to use and ask RISC OS to give you a unique handle, then select that font and set up certain parameters such as size and resolution before it's possible to print. Once you've finished using a particular font, it's important to tell RISC OS you don't need it any longer — this way it can remove it from the font cache and free up valuable memory.

The SWI calls we'll be using are **Font_FindFont** and **Font_LoseFont** to locate and discard individual fonts respectively, **Font_Paint** to display a string at a given location on screen, and **ColourTrans_SetFontColours** to choose an appropriate palette to support antialiasing. Here's a code sample to show how you request the initial font handle:

```
char font_name[] = "Trinity.Medium";
int font_handle = 0;
int font_size = 24 * 16; /* size in 16ths
of a point */
int font_res = 0; /* Use the default font
resolution */
int font_flags = 1u << 4;
_kernel_swi_regs in, out;
in.r[1] = (int) font_name;
in.r[2] = in.r[3] = font_size;
in.r[4] = in.r[5] = font_res;
_kernel_swi(Font_FindFont, &in,
&out);
font_handle = out.r[0];
```

If you've had a dig around in the **!Fonts** directory on your machine, you'll recognise the format of the font descriptor — when passing this to **Font_FindFont**, you should ensure the string is terminated with a control character. Under normal circumstances this won't be a problem, but it's worth bearing in mind. As we've seen in other examples, the string is passed to the SWI by reference to its address in memory, converted to an integer.

The font size is specified in 16ths of a point, so the font size I'm requesting above is 24 point. Registers 2 and 3 hold the *x* and *y* dimensions of the chosen font, so it's possible to select something other than the standard aspect ratio. Registers 4 and 5 hold the *x* and *y* resolutions of the font — setting these to zero indicates that you're happy with the standard resolution.

Font_FindFont will then return a font handle in R0 — this can be used in a wide range of font-related SWI calls and once each font has been set up in this way, swapping between them is a simple process. It can even be done part-way through painting a line of text to the screen.

Although there's a **Font_SetPalette** SWI, this can only be used by single-tasking applications and when writing programs to run in the multitasking WIMP environment, more cooperative methods should be used. The **ColourTrans** module comes into play once more and I have used the **ColourTrans_SetFontColours** SWI to prepare an appropriate antialiased palette. The call takes four parameters, shown below:

```
in.r[0] = 0;
in.r[1] = 0xffffff00;
in.r[2] = 0x00000000;
in.r[3] = 14;
_kernel_swi(ColourTrans_SetFontColou
rs, &in, &out);
```

A zero in R0 informs **ColourTrans** to set the colours of the currently selected font and the next two registers hold the palette entries of the background and foreground colours respectively. Finally, the value in R3 tells **ColourTrans** how many colour steps are desired between foreground and background — a value of 14 is the maximum, and is a good value to use in order to perform optimum antialiasing.

All that remains is to select the font using the returned font handle, and paint some text on the screen — I'll cover this next month as well as introducing some particularly useful font manipulation tools. See you then. AU

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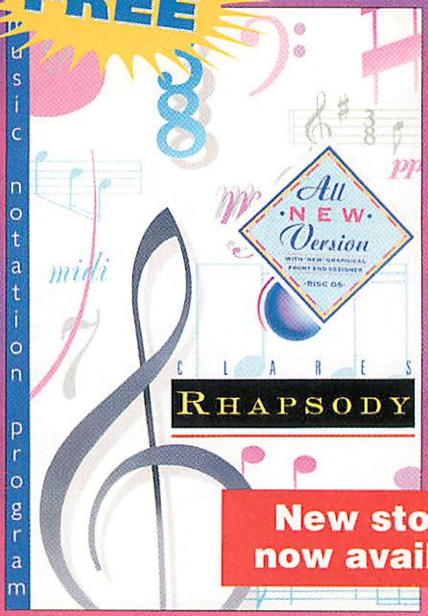


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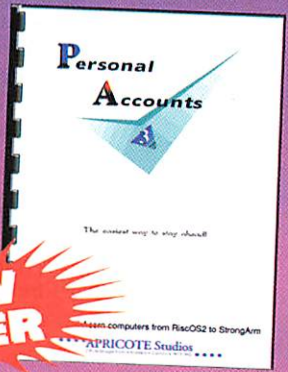
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!BootPlus horror

I would be grateful if you would help me out of a very tricky predicament. I was attempting to install !BootPlus from the February 1997 cover disc onto my A7000 (regrettably not A7000+) and have done some very stupid things.

I would be grateful if you would be able to supply a contact e-mail or telephone number for the author Malcolm Ripley so that I can try and rectify the errors or, alternatively, confirm the worst.

Nick Whitehead
Cambridge, nbtw2@cam.ac.uk

It's true that the earlier version nof !BootPlus was a little unforgiving — which is why, with feedback, Malcolm updated it, making it more friendly and allowing the boot editing functions to be used without the passwording. The new version was on the July 1997 cover disc.

C++ programming

With my father being a teacher, there has always been an Acorn in my house. Within the past year I've become interested in programming for Acorn machines. I started using HTML and have been fairly successful but I wish to know how to program using C++.

I paid a visit to my local bookshop and browsed through the books there. To my frustration, all of them based themselves around a certain piece of PC software which was not what I had in mind. I wanted to program on an Acorn not on a PC.

Please could you help me by answering these simple questions. How could I get started? Is there any software I need to purchase to help me and is this going to cost much?

Owen Griffin (aged 12)
Reading, Berks

You can buy Beebug's C compiler quite cheaply and then just about any C programming book will do. Although they are usually PC-oriented choose one that covers standard ANSI C for starters.

Dabhand Press did a C programming book which may still be available, it was not machine specific and covered how-to-do-it issues. There was a third edition which corrected the earlier errors.

All keyed up

Am I the only one who noticed that the keyboard on the front of the July 1997 issue is in fact an A5000 keyboard? You can tell by the ledge just behind the function keys.

David Glover, Oxford
glover@argonet.co.uk

You caught us out. The next test will be harder.

ARM win over Intel

I had to send this section in from the July edition of Personal Computer World. When I saw it I couldn't stop laughing:

'Further to my column which dealt with the subject of JAMS (Numbers Count, April) the result X(34732165539)=876 has been reported by both Mike Bennet (2hr, 11min, 3 sec on an Acorn Risc PC with a StrongARM processor) and by Nigel Backhouse (4.5 days on a Pentium 133).'

It seems as if they have calculated the same thing, so those time differences are just amazing. What type of result would a StrongARM produce if it had a hardware FPA? Maybe the PC needs to be cleaned out — or put to a better use as a coffee table.

Niraj Goyal
ngoyal@globalnet.co.uk

ters

Behind the bar

One of the things that I have found frustrating about the RISC OS desktop is when the iconbar is behind a window and I want to use another program.

This often happens if I am using Impression and want to change to Tablemate or Graphmate. It only takes a moment to press Shift+F12 but it can be frustrating to let go of the mouse.

To solve this, I got my son to write a program so that all I have to do is to put the mouse pointer in the bottom left hand corner of the screen and the iconbar now moves to the front (or back if it is at the front).

We have been using it for a few months now and it is really useful. I've sent a copy of it to HENSA and it's called !Barman. Do try it out.

r.j.sapey@uclan.ac.uk

Dealer frustration

Like so many dealers I awaited Acorn's CyberCafé promotional tour and hoped that one venue would be close to my dealership base so that I could time my ads to coincide with the tour. Just imagine the weight of local press and radio combined with letters to local schools, all in a build up to the tour.

I sent several e-mail messages to Acorn's Market Managers and Sales Executive regarding the CyberCafé and other matters which were mainly unanswered.

I am sure you can imagine my joy to receive an Acorn Dealer News Bulletin dated June 3 1997, which arrived rather late on the June 16, informing me that there was to be a tour stop at Lakeside Shopping Centre — only three miles away from my location.

On closer inspection my joy sank and ended in anger when I read that the opening date for Lakeside CyberCafé was the very same day that I received the one piece of news I have been waiting for all year — June 16.

What a waste. Lost opportunities, lost sales and lost enthusiasm. But what do we expect from a British company? After all Acorn must have enough money to throw away nowadays.

The attitude and lack of coordination and cooperation between Acorn and its dealer base that I've experienced is like banging your head against a brick wall. Although I have just realised that for a change if I turn round I can bang my head on the other wall.

One small positive point, I have made myself known to the exhibition manager and I will be assisting at the exhibition every day during peak shopping periods including all day Saturday and Sunday. I hope something good can come out of this after all.

Paul Robinson
Havering Acorn Centre
South Essex

Acorn advertising

With reference to the letter from William Simpson about the lack of advertising by Acorn, we all know that large scale advertising on TV and in the Press depends on one thing and one thing only — the availability of cash. Since Acorn and ARM are small companies with small resources there is never going to be enough cash to promote their technology in this way.

How about all these people who support the Acorn platform — who are quibbling about the lack of advertising — doing something about it themselves? What is the one media of large scale free advertising? The Web.

If all Acorn users producing Web pages advertised this fact it would give Acorn a large amount of free advertising and the name should become known throughout the world.

I myself am just completing my own Web pages which is publicising the churches in our area, and they will advertise the fact they were created on an Acorn.

The Webmaster at Acorn has sent me the company logo and has promised to send me the new logo Acorn@heart when it is produced. Acorn are very happy for their users to do this. I am just trying to get the latest ARM Logo and their permission.

I am aware that a number of people have done something like this and if all Acorn users with a Web page did it then the advertising for Acorn would increase dramatically.

Come on all you Acorn users. Let's at least attempt to play Wintel at its own game.

Wilf Beeson

wwwb@argonet.co.uk

A big thank you

I'd like to express my sincerest of thanks, through your pages, to Mr Sergio Monesi, of Public Domain software fame, and especially PPPDriver.

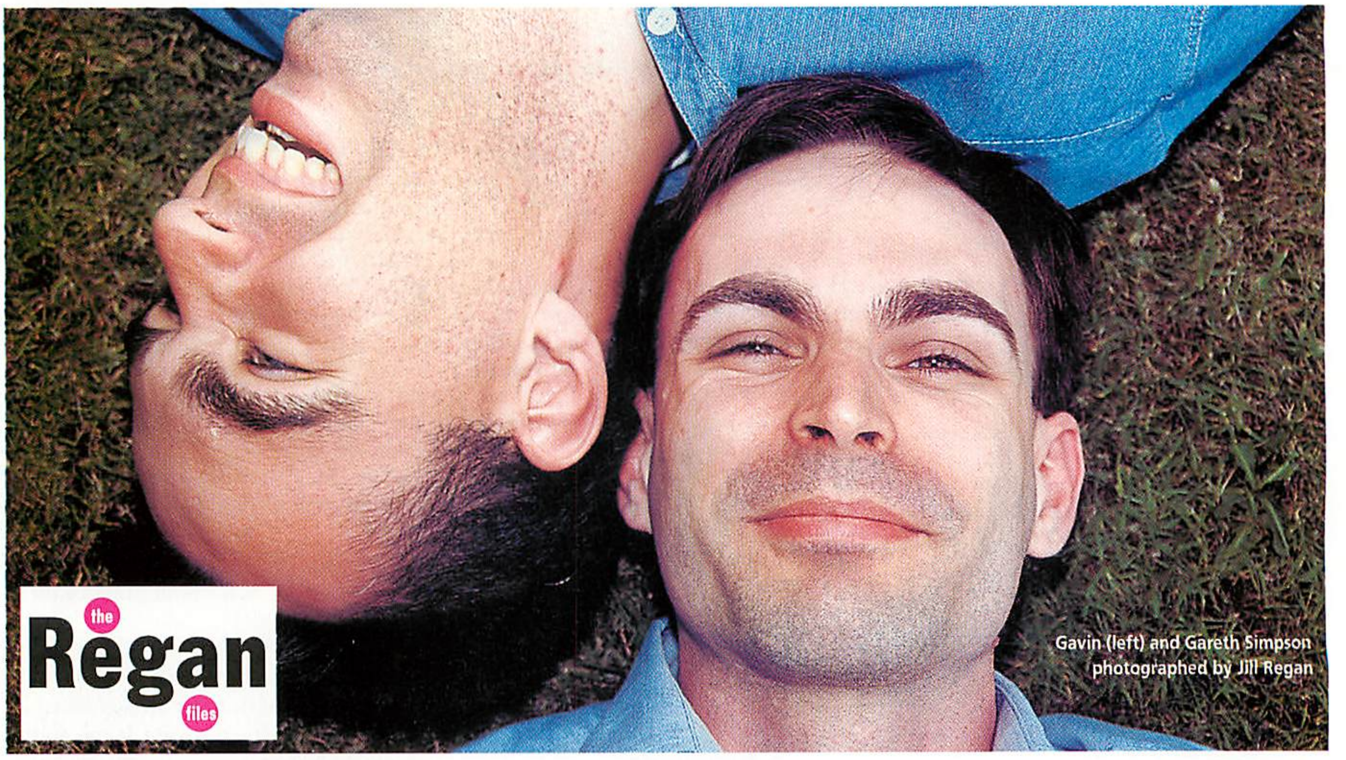
Working as a volunteer for the Strathclyde Lupus Group — a support group for both men and women suffering from the chronic immune system disease Lupus — we have recently discovered the massive resource that is available to us — the Internet.

Thanks to Mr Monesi, we are receiving our Internet access for next to nothing. Our service provider is the University of Glasgow and I'm using the Freenet suite of programs. So, nothing spent yet.

The only potential cost would have been the registration of Mr Monesi's PPPDriver software. However, thanks to his generosity, this fee has now been waived. For this we are eternally grateful. His act has certainly extended my faith in the Acorn Community.

David Thomson
Strathclyde Lupus Group
Scotland
http://www.hamline.edu/lupus

the Regan files



Gavin (left) and Gareth Simpson photographed by Jill Regan

We all know the show business saying – never work with children or animals. In business it can be almost as dangerous to work with your family.

Simtec Electronics is in this respect a very dangerous company – Simtec is owned by Gareth Simpson and run by Gareth's brother Gavin, with father Graeme on the team in an advisory capacity. For good measure (and covering the 'children and animals' angle) there's a three-month old golden retriever called Honey too.

Simtec have been on the interview list for a while but the brothers had been putting me off until they'd moved into their new premises. I first met the friendly Simpson family at an Acorn World show several years ago. Simtec doesn't sell directly from the stand – you can chat, totally free from any hard sales. This did intrigue me.

'At shows we try to tell people what is best for them,' Gavin explains, 'even if it means not selling them something on that day. They come back to us because we have given them sound advice – well that's what we try to give. Because of our size and because of the market we cannot rely on selling lots to a lot of different people – we have to rely on repeat customers, only selling what they need. We do our best.'

Simtec's role in life as a supplier of reliable upgrades for Acorn machines can, they feel, actually put them in direct competition with Acorn.

'Acorn wants people to buy a new machine. We want people to remain good Acorn customers and to buy more in the future. If they buy more Acorn machines then they are likely to buy more products, not only ours. If they go off and buy a PC then it is a loss to everybody.'

'Our argument is – keep the old machines, keep them upgraded to a usable specification and then a school, for instance, will still have some money left over to buy one or two new machines. A typical example is a primary school – which may have half a dozen A3000's they want to upgrade to RISC OS 3 and put memory and a hard disc in them. They could put a small network in so they need a bigger machine to run that. They have then got a dependency on Acorn, which helps the Acorn market as a whole, not just us.'

While at university Gareth discovered traditional Chinese opera, which he performs regularly. He also once solemnly taught a friend an aria which turned out on closer inspection to be *The Ying Tong Song* by the Goons. His interest comes from his grandfather who used to tell him stories about how he captured pirates offshore from Hong Kong. Now Gareth has the travel bug he can conveniently arrange to be working abroad when he needs a break.

> **'At shows we try to tell people what is best for them, even if it means not selling them something on that day'**

The company is split so that Gareth does the designing for Simtec and oversees the manufacturing, while Gavin runs the business. Gareth took the usual path into computers via the ZX81 to the Archimedes. Gavin on the other hand was not interested by them, although Gareth lives in hope that he will learn to love them by exposure. Gavin's background is as an officer in the Territorial Army and writing safety reports for the nuclear industry.

Gavin explains that Simtec really started at Hull when Gareth was trying to upgrade his machine:

'Basically it boiled down to the fact that Gareth could build a 4Mb upgrade for half the price he had seen others. His friends all wanted them too, and one thing lead to another. He gave up his PhD and set up Simtec.'

'We then brought Gav on board,' Gareth adds. 'He was looking for gainful employment. He's a maths graduate and with his reliability expertise and good organising skills Gavin is my walking diary – he attempts to arrange my life in a meaningful way. He gets me to do work.'

'The best way of doing that is to put Gareth's passport in the bank – I'm the only one who can sign it out.'

'He ransoms my passport and rations my chocolate – I'm a chocoholic.'

'I try to keep Gareth away from customers because he will talk too much, get too involved and will then tell them how to do it for free. He will also agree that he can do almost anything. I have a list of about 90 potential developments, but it gets pruned severely.'

'Gavin is sufficiently objective to be able to sit down and get away from the fact that such-and-such a project is an interesting thing to do. He can think about what is going to pay the wages and buy him a new car'.

Perhaps working with your family in business can work after all.

Jill Regan AU


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